tissues in health care, and as a food additive.
IC ICM C07C051-41
ICS C07C059-19; A61K031-19
CC 9-14 (Biochemical Methods)
Section cross-reference(s): 17, 23, 48
IT **52009-14-0P**, Calcium pyruvate
RL: **FFD (Food or feed use)**; IMF (Industrial manufacture); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for producing calcium pyruvates by the reaction of calcium organic acid salts with pyruvic acid)
IT **52009-14-0P**, Calcium pyruvate
RL: **FFD (Food or feed use)**; IMF (Industrial manufacture); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for producing calcium pyruvates by the reaction of calcium organic acid salts with pyruvic acid)
RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

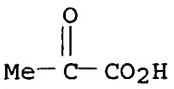
●1/2 Ca

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 61 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:56507 HCAPLUS
DOCUMENT NUMBER: 130:95309
TITLE: Method for the preparation of calcium pyruvates by the neutralization of pyruvic acid with calcium salts of organic acids
INVENTOR(S): Pischel, Ivo; Weiss, Stefan; Ortenburger, Guenter; Koenig, Harro
PATENT ASSIGNEE(S): SKW Trostberg A.-G., Germany
SOURCE: Ger. Offen., 4 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19729786	A1	19990114	DE 1997-19729786	19970711
US 5962734	A	19991005	US 1997-955838	19971021
TW 404833	B	20000911	TW 1998-87109308	19980611
CA 2296017	AA	19990121	CA 1998-2296017	19980702
WO 9902479	A1	19990121	WO 1998-EP4089	19980702

W: AU, BG, BR, CA, CN, CZ, HU, IL, JP, KR, MX, NO, NZ, PL, RO, RU, SG, SK, TR
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE



●1/2 Ca

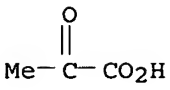
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 60 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:64758 HCAPLUS
DOCUMENT NUMBER: 130:107263
TITLE: Method for producing calcium pyruvates by the reaction of calcium organic acid salts with pyruvic acid
INVENTOR(S): Pischel, Ivo; Weiss, Stefan; Ortenburger, Gunter; Konig, Harro
PATENT ASSIGNEE(S): SKW Trostberg A.-G., Germany
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9902479	A1	19990121	WO 1998-EP4089	19980702
W: AU, BG, BR, CA, CN, CZ, HU, IL, JP, KR, MX, NO, NZ, PL, RO, RU, SG, SK, TR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19729786	A1	19990114	DE 1997-19729786	19970711
US 5962734	A	19991005	US 1997-955838	19971021
CA 2296017	AA	19990121	CA 1998-2296017	19980702
AU 9887312	A1	19990208	AU 1998-87312	19980702
AU 725505	B2	20001012		
EP 993433	A1	20000419	EP 1998-938682	19980702
EP 993433	B1	20030205		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE				
BR 9810702	A	20000808	BR 1998-10702	19980702
NZ 501771	A	20001027	NZ 1998-501771	19980702
JP 2002507998	T2	20020312	JP 1999-508097	19980702
AT 232195	E	20030215	AT 1998-938682	19980702
MX 9911864	A	20000531	MX 1999-11864	19991216
NO 2000000122	A	20000110	NO 2000-122	20000110

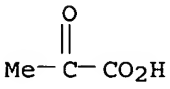
PRIORITY APPLN. INFO.:		
DE 1997-19729786	A	19970711
US 1997-955838	A	19971021
WO 1998-EP4089	W	19980702

AB High-purity calcium pyruvates having very good storage stability is prepared by the reaction of calcium salts of organic acids (e.g., calcium acetate) or keto acids or hydroxy acids at -20° to +120°, optionally in the presence of a diluent or a solvent. Calcium pyruvates having 0-2.5 mol of hydration water per mol of salt are used to increase stamina and vigor in the field of sports, to reduce weight and fat, as a protective substance for body cells and tissues, as a substance for inhibiting the formation of free radicals, a free radical scavenger in body cells and



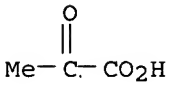
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



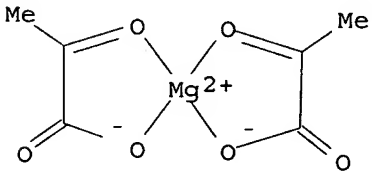
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

69-53-4, Ampicillin 69-72-7, Salicylic acid, biological studies
76-25-5, Triamcinolone acetonide 79-57-2, Oxytetracycline 83-43-2,
Methyl prednisolone 87-08-1, Penicillin V 89-57-6, Mesalamine
99-26-3, Bismuth subgallate 108-95-2, Phenol, biological studies
111-84-2, Nonane 112-80-1, Oleic acid, biological studies
113-24-6, Sodium Pyruvate 114-07-8, Erythromycin 115-20-8,
Trichloroethanol 118-60-5, 2-Ethylhexyl salicylate 124-94-7,
Triamcinolone 127-17-3, Pyruvic acid, biological studies 127-17-3D,
Pyruvic acid, salts 131-57-7, Oxybenzone 134-09-8, Menthyl
anthranilate 134-62-3, N,N-Diethyl-m-toluamide 143-07-7, Dodecanoic
acid, biological studies 147-24-0, Diphenhydramine hydrochloride
153-61-7, Cephalothin 302-79-4, Tretinoin 328-50-7,
α-Ketoglutaric acid 373-49-9, Palmitoleic acid 443-48-1,
Metronidazole 463-40-1, Linolenic acid 506-12-7, Margaric acid
506-30-9, Arachidic acid 544-63-8, Tetradecanoic acid, biological
studies 544-64-9, Myristoleic acid 552-94-3, SAlicylsalicylic acid
564-25-0, Doxycycline 600-22-6, Methyl Pyruvate 637-58-1, Pramoxine
hydrochloride. 665-66-7, Amantadine hydrochloride 872-50-4,
N-Methylpyrrolidone, biological studies 1002-84-2, Pentadecanoic acid
1344-85-0, Bismuth aluminate 1403-66-3, Gentamicin 1404-04-2, Neomycin
1405-87-4, Bacitracin 1406-05-9, Penicillin 1406-11-7, Polymyxin
1406-18-4, Vitamin E 1981-50-6, Margaroleic acid **2922-61-4**,
Lithium Pyruvate 3079-28-5 3385-03-3, Flunisolide **4151-33-1**,
Potassium Pyruvate 5466-77-3, Ethylhexyl p-methoxycinnamate 5534-09-8,
Beclomethasone dipropionate 5536-17-4, Vidarabine 5593-20-4,
Betamethasone dipropionate 6197-30-4, Octocrylene 6385-02-0,
Meclofenamate sodium 6506-37-2, Nimorazole 6969-49-9 6998-60-3,
Rifamycin 7440-69-9D, Bismuth, compds., biological studies 11111-12-9,
Cephalosporin 13463-67-7, Titanium dioxide, biological studies
14882-18-9, Bismuth subsalicylate 15307-86-5, Diclofenac 15686-71-2,
Cephalexin 15687-27-1, Ibuprofen 18323-44-9, Clindamycin
18983-79-4, Magnesium Pyruvate 19387-91-8, Tinidazole
21245-02-3, Padimate O 22071-15-4, Ketoprofen 22204-53-1, Naproxen
22494-42-4, Diflunisal 24887-16-9, Zinc Pyruvate 25655-41-8,
Povidone-iodine 26787-78-0, Amoxicillin 29204-02-2, Gadoleic acid
30516-87-1, Zidovudine 34597-40-5, Fenoprofen calcium 36322-90-4
36791-04-5, Ribavirin 38194-50-2, Sulindac 41340-25-4, Etodolac
42924-53-8, Nabumetone **52009-14-0**, Calcium Pyruvate
57644-54-9, Bismuth subcitrate 58817-05-3 59227-89-3, Azone
59277-89-3, Acyclovir 63585-09-1, Foscarnet sodium 64425-90-7, Choline
magnesium trisalicylate, biological studies 64872-76-0, Butoconazole
67915-31-5, Terconazole 74103-07-4, Ketorolac tromethamine 96436-87-2
107910-75-8, Ganciclovir sodium 145482-34-4, Manganese Pyruvate
152521-52-3, Betafectin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic permeation enhanced-wound healing compns. containing
antioxidant and lactate and fatty acids)

IT **113-24-6**, Sodium Pyruvate **2922-61-4**, Lithium Pyruvate
4151-33-1, Potassium Pyruvate **18983-79-4**, Magnesium
Pyruvate **52009-14-0**, Calcium Pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic permeation enhanced-wound healing compns. containing
antioxidant and lactate and fatty acids)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)

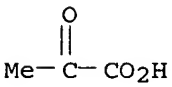
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5874479	A	19990223	US 1998-19457	19980205
JP 2002356421	A2	20021213	JP 2002-82387	19920115
JP 2003231632	A2	20030819	JP 2002-362245	19920115
ZA 9502911	A	19960828	ZA 1995-2911	19950407
US 5981606	A	19991109	US 1998-19316	19980205
PRIORITY APPLN. INFO.:			US 1991-663500 B1	19910301
			US 1993-53922 B2	19930426
			US 1994-224936 B2	19940408
			JP 1992-505329 A3	19920115
			US 1997-37730P P	19970202

AB This invention pertains to therapeutic wound healing compns. for protecting and resuscitating mammalian cells. This invention also pertains to therapeutic permeation enhanced-wound healing compns. for enhancing the penetration of actives into membranes and increasing the proliferation and resuscitation rate of mammalian cells. The therapeutic wound healing composition comprises pyruvate, an antioxidant, lactate, permeation enhancer, and a mixture of saturated and unsatd. fatty acids. This invention also pertains to methods for preparing and using the permeation enhanced-wound healing compns. and the topical and ingestible pharmaceutical products in which the therapeutic compns. may be used. Thus, a wound healing composition was obtained from sodium pyruvate 2, vitamin E 1, chicken fat 2, LYCD 2400 U, shark liver oil 3, petrolatum 64, paraffin 5, and emulsifier 0.2%.

IC ICM A61K031-045
ICS A61K031-07; A61K031-355
INCL 514724000
CC 63-6 (Pharmaceuticals)
IT Anesthetics
Anti-inflammatory agents
Antibacterial agents
Antihistamines
Antimicrobial agents
Antioxidants
Antiviral agents
Fungicides
Immunostimulants
Permeation enhancers
Sunscreens
Surfactants
Wound healing
(therapeutic permeation enhanced-wound healing compns. containing antioxidant and lactate and fatty acids)
IT 50-02-2, Dexamethasone 50-21-5, biological studies 50-23-7 50-24-8, Prednisolone 50-78-2, Acetylsalicylic acid 50-81-7, Vitamin C, biological studies 53-03-2, Prednisone 53-06-5 53-86-1, Indomethacin 56-75-7, Chloramphenicol 57-10-3, Palmitic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 57-13-6, Urea, biological studies 57-62-5, ChlorTetracycline 57-92-1, Streptomycin, biological studies 58-95-7, Vitamin E acetate 59-01-8, Kanamycin 59-87-0, Nitrofurazone 60-33-3, Linoleic acid, biological studies 60-54-8D, Tetracycline, derivs. 61-33-6, Penicillin G, biological studies 61-68-7, Mefenamic acid 65-85-0, Benzoic acid, biological studies 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 67-68-5, DMSO, biological studies 68-12-2, DMF, biological studies 68-26-8, Vitamin A

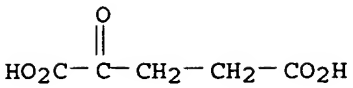
ICS A61K031-195; A61K035-52; A61K035-12; A61K038-43
CC 2-8 (Mammalian Hormones)
Section cross-reference(s): 1, 63
IT **Alzheimer**'s disease
Antidepressants
Anxiolytics
Cocoa products
Cognition enhancers
Drug delivery systems
Drug withdrawal
(method and compns. for treating conditions associated with neurotransmitter deficiencies using neurotransmitter precursors in combination with xanthines)
IT 56-85-9, Glutamine, biological studies 60-18-4, Tyrosine, biological studies 62-49-7, Choline 63-91-2, Phenylalanine, biological studies 71-00-1, Histidine, biological studies 87-67-2, Choline bitartrate, biological studies 127-17-3D, Pyruvic acid, derivs. 541-15-1, Carnitine 3040-38-8, Acetyl-L-carnitine **52009-14-0**, Calcium pyruvate
RL: BPR (Biological process); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(method and compns. for treating conditions associated with neurotransmitter deficiencies using neurotransmitter precursors in combination with xanthines)
IT **52009-14-0**, Calcium pyruvate
RL: BPR (Biological process); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(method and compns. for treating conditions associated with neurotransmitter deficiencies using neurotransmitter precursors in combination with xanthines)
RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 59 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:136777 HCAPLUS
DOCUMENT NUMBER: 130:200931
TITLE: Therapeutic permeation enhanced-wound healing compositions containing antioxidant and lactate and fatty acids
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Company, USA
SOURCE: U.S., 40 pp., Cont.-in-part of U.S. Ser. No. 224,936, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent



●x Mg

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 58 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:141213 HCAPLUS
DOCUMENT NUMBER: 130:205539
TITLE: Method and compositions for promoting the neural synthesis and release of neurotransmitters using neurotransmitter precursors in combination with xanthines
INVENTOR(S): Shell, William E.; Jarmel, Mark E.
PATENT ASSIGNEE(S): Nicada, Inc., USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9908681	A1	19990225	WO 1998-US16882		19980813
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
AU 9891975	A1	19990308	AU 1998-91975		19980813
PRIORITY APPLN. INFO.:			US 1997-55732P	P	19970813
			US 1998-133660	A	19980812
			WO 1998-US16882	W	19980813

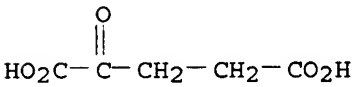
AB A method and compns. for promoting the neural synthesis and release in an animal subject of the neurotransmitters acetylcholine, GABA, glutamate, norepinephrine, dopamine, aspartate, histamine and serotonin. To enhance release of the neurotransmitter in the subject precursors for each of these neurotransmitters may be administered concomitantly with a xanthine and with one or more precursors for another neurotransmitter selected from precursors for the neurotransmitters histamine, glutamine and aspartate. The xanthines include caffeine, theophylline and theobromine. This procedure for the promotion of synthesis and release of the neurotransmitters may be employed in the treatment of subjects having a neurotransmitter deficiency, including reduced neural tone and excessive neural activity. The compns. of the invention promote the synthesis and release of specific neurotransmitters while avoiding the side effects seen with other pharmaceutical agents.
IC ICM A61K031-52

(pharmaceutical compns. comprising D-galactose for treatment of metabolic stress)

IT 59-23-4, D-Galactose, biological studies 70-26-8, L-Ornithine **305-72-6** 328-50-7, α-Ketoglutaric acid **39649-91-7**, Potassium α-ketoglutarate **56095-64-8** 105596-49-4 155173-96-9 **226955-63-1** 226955-64-2 226955-65-3 226955-66-4 226955-67-5
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pharmaceutical compns. comprising D-galactose for treatment of metabolic stress)

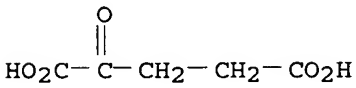
IT **305-72-6 39649-91-7**, Potassium α-ketoglutarate **56095-64-8 226955-63-1**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pharmaceutical compns. comprising D-galactose for treatment of metabolic stress)

RN 305-72-6 HCAPLUS
CN Pentanedioic acid, 2-oxo-, disodium salt (9CI) (CA INDEX NAME)



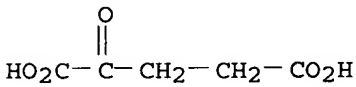
●2 Na

RN 39649-91-7 HCAPLUS
CN Pentanedioic acid, 2-oxo-, dipotassium salt (9CI) (CA INDEX NAME)



●2 K

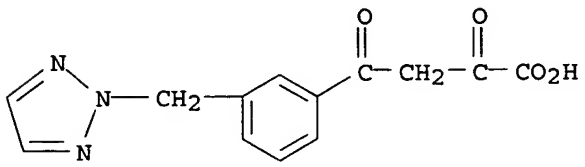
RN 56095-64-8 HCAPLUS
CN Pentanedioic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●x Ca

RN 226955-63-1 HCAPLUS
CN Pentanedioic acid, 2-oxo-, magnesium salt (9CI) (CA INDEX NAME)

RN 251966-40-2 HCAPLUS
CN Benzenebutanoic acid, α,γ-dioxo-3-(2H-1,2,3-triazol-2-ylmethyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 57 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:392954 HCAPLUS
DOCUMENT NUMBER: 131:27962
TITLE: Pharmaceutical compositions comprising D-galactose for treatment of metabolic stress
INVENTOR(S): Afting, Ernst-Guenter; Reutter, Werner
PATENT ASSIGNEE(S): Germany
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 922459	A1	19990616	EP 1998-123447	19981211
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19755367	A1	19990624	DE 1997-19755367	19971212
DE 19755367	C2	20010322		

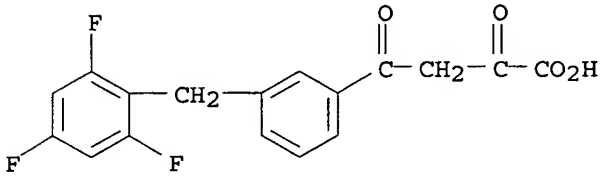
PRIORITY APPLN. INFO.: DE 1997-19755367 A 19971212

AB Solid or liquid compns. containing high dosages of D-galactose, especially when combined with α-ketoglutaric acid and/or ornithine or salts thereof, are useful for treatment of metabolic stress such as occurs in liver disease, alcoholism, encephalopathy, and eating disorders (no data). These compns. provide readily available energy to compensate for metabolic energy deficits in these patients. α-Ketoglutaric acid and ornithine aid in detoxication of NH4+ by promoting its conversion to amino acids and urea. Preferred amts. per dosage unit are 1-20 g D-galactose, 50-300 mg α-ketoglutaric acid, and 50-300 mg ornithine.

IC ICM A61K031-70
ICS A61K031-195; A61K031-19
ICI A61K031-70, A61K031-195, A61K031-19
CC 1-10 (Pharmacology)
IT Brain, disease
Cachexia
Liver, disease
Malnutrition

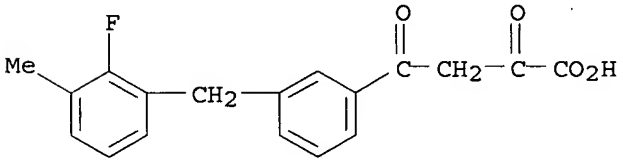
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(target compound; preparation of aromatic and heteroarom. aryldioxobutyric acid
derivs. as **HIV** integrase inhibitors)

RN 251966-32-2 HCAPLUS
CN Benzenebutanoic acid, α,γ-dioxo-3-[(2,4,6-trifluorophenyl)methyl]-, sodium salt (9CI) (CA INDEX NAME)



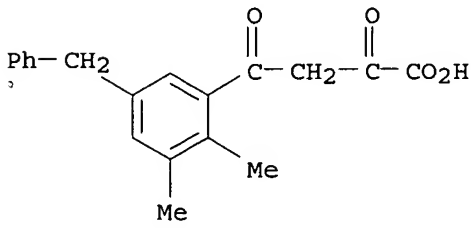
● Na

RN 251966-33-3 HCAPLUS
CN Benzenebutanoic acid, 3-[(2-fluoro-3-methylphenyl)methyl]-α,γ-dioxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 251966-36-6 HCAPLUS
CN Benzenebutanoic acid, 2,3-dimethyl-α,γ-dioxo-5-(phenylmethyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

4-[5-Benzyl-3-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-17-3P, 2,4-Dioxo-4-[3-(pyridin-3-ylmethyl)phenyl]butyric acid trifluoroacetate 251966-18-4P, 4-[3-[(3-Methylpyridin-2-yl)methyl]phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-19-5P, 4-(5-Benzyl-3-morpholinophenyl)-2,4-dioxobutyric acid trifluoroacetate 251966-20-8P, 4-[3-Benzyl-5-(pyridin-2-ylmethyl)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-21-9P, 4-[3-Benzyl-5-(pyridin-3-ylmethyl)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-22-0P, 4-[5-Benzyl-2-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-23-1P, 4-[5-Benzyl-2-methoxy-3-[(4-methylpiperazin-1-yl)methyl]phenyl]-2,4-dioxobutyric acid bis(trifluoroacetate) 251966-24-2P, 4-[3-(2-Fluorobenzyl)-5-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-25-3P, 4-[3-(4-Fluorobenzyl)-5-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-26-4P, 4-[3-(3-Fluorobenzyl)-5-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-27-5P, 4-[5-Benzyl-2-isopropoxy-3-[2-(N,N-dimethylamino)ethoxy]phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-28-6P, 4-[5-Benzyl-2-isopropoxy-3-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid hydrochloride
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(target compound; preparation of aromatic and heteroarom. aryldioxobutyric acid
derivs. as **HIV** integrase inhibitors)

IT 251966-29-7P, 4-[5-Benzyl-2-isopropoxy-3-(1-piperidinylmethyl)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-30-0P, 4-[3-Benzyl-5-(4-benzylpiperazin-1-yl)phenyl]-2,4-dioxobutyric acid hemihydrochloride 251966-31-1P, 4-(1-Benzyl-1H-indol-6-yl)-2,4-dioxobutyric acid hydrochloride (4:3) **251966-32-2P**, 2,4-Dioxo-4-[3-(2,4,6-trifluorobenzyl)phenyl]butyric acid sodium salt **251966-33-3P**, 4-[3-(2-Fluoro-3-methylbenzyl)phenyl]-2,4-dioxobutyric acid sodium salt 251966-35-5P, 2,4-Dioxo-4-[3-(phenoxymethyl)phenyl]butyric acid methyl ester **251966-36-6P**, 4-(5-Benzyl-2,3-dimethylphenyl)-2,4-dioxobutyric acid sodium salt 251966-37-7P, 4-[3-(2-Methylbenzyl)-5-pyrimidin-2-ylphenyl]-2,4-dioxobutyric acid methyl ester 251966-38-8P, 4-[3-Benzyl-2-(pyrimidin-2-ylamino)phenyl]-2,4-dioxobutyric acid hydrochloride 251966-39-9P, 4-[3-(Benzimidazol-1-ylmethyl)-5-(2-methylbenzyl)phenyl]-2,4-dioxobutyric acid trifluoroacetate **251966-40-2P**, 2,4-Dioxo-4-[3-(2H-1,2,3-triazol-2-ylmethyl)phenyl]butyric acid sodium salt 251966-41-3P, 4-[3-(Benzimidazol-1-ylmethyl)phenyl]-2,4-dioxobutyric acid trifluoracetic acid salt 251966-42-4P, 4-[3-(Benzyloxy)-5-[[6-[(tert-butoxycarbonyl)amino]hexyl]oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid methyl ester 251966-43-5P, 4-[3-(Benzyloxy)-5-(2-morpholin-4-ylethoxy)phenyl]-2-hydroxy-4-oxobut-2-enoic acid trifluoroacetic acid salt
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(target compound; preparation of aromatic and heteroarom. aryldioxobutyric acid
derivs. as **HIV** integrase inhibitors)

IT **251966-32-2P**, 2,4-Dioxo-4-[3-(2,4,6-trifluorobenzyl)phenyl]butyric acid sodium salt **251966-33-3P**, 4-[3-(2-Fluoro-3-methylbenzyl)phenyl]-2,4-dioxobutyric acid sodium salt **251966-36-6P**, 4-(5-Benzyl-2,3-dimethylphenyl)-2,4-dioxobutyric acid sodium salt **251966-40-2P**, 2,4-Dioxo-4-[3-(2H-1,2,3-triazol-2-ylmethyl)phenyl]butyric acid sodium salt

251965-63-6P, 4-(5-Benzyl-2,3-dimethylphenyl)-2,4-dioxobutyric acid 251965-64-7P, 4-[3-(3,5-Dibromobenzyl)phenyl]-2,4-dioxobutyric acid 251965-65-8P, 4-[3-(2-Methylbenzyl)-5-pyrimidin-2-ylphenyl]-2,4-dioxobutyric acid 251965-66-9P, 4-[3-Benzyl-2-(pyrimidin-2-ylamino)phenyl]-2,4-dioxobutyric acid 251965-67-0P, 4-[3-(Benzimidazol-1-ylmethyl)-5-(2-methylbenzyl)phenyl]-2,4-dioxobutyric acid 251965-68-1P, 2,4-Dioxo-4-[3-[3-(trifluoromethyl)benzyl]phenyl]butyric acid 251965-69-2P, 4-(4-Phenoxyphenyl)-2,4-dioxobutyric acid 251965-70-5P, 2,4-Dioxo-4-[3-(2H-1,2,3-triazol-2-ylmethyl)phenyl]butyric acid 251965-71-6P, 4-[3-Benzyl-5-(6-methoxypyridin-2-yl)phenyl]-2,4-dioxobutyric acid 251965-72-7P, 4-[3-(2H-1,2,3-Benzotriazol-2-ylmethyl)phenyl]-2,4-dioxobutyric acid 251965-73-8P, 4-[3-Benzyl-5-[2-(4-methylpiperazin-1-yl)pyrazin-6-yl]phenyl]-2,4-dioxobutyric acid 251965-75-0P, 4-(3-Phenethylphenyl)-2,4-dioxobutyric acid 251965-77-2P, 4-[4-(3-Chlorobenzyl)phenyl]-2,4-dioxobutyric acid 251965-78-3P, 4-[3-(Benzimidazol-1-ylmethyl)phenyl]-2,4-dioxobutyric acid 251965-79-4P, 4-[3-(Benzyloxy)-5-[[6-[(tert-butoxycarbonyl)amino]hexyl]oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-80-7P, 4-[3-(Benzotriazol-1-ylmethyl)phenyl]-2,4-dioxobutyric acid 251965-81-8P, 4-[3-[(3,5-Dimethylpyrazol-1-yl)methyl]phenyl]-2,4-dioxobutyric acid 251965-82-9P, 4-[3-(Benzyloxy)-5-(2-morpholin-4-ylethoxy)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-83-0P, 4-(4-Methyl-3-phenoxyphenyl)-2,4-dioxobutyric acid 251965-84-1P, 4-[3-(2-Hydroxybenzyl)phenyl]-2,4-dioxobutyric acid 251965-85-2P, 4-[3-Benzyl-5-[6-(dimethylamino)pyrazin-2-yl]phenyl]-2,4-dioxobutyric acid 251965-86-3P, 4-(5-Benzyl-2-methoxypyridin-3-yl)-2,4-dioxobutyric acid 251965-87-4P, 3-(Biphenyl-4-yl)-2,4-dioxobutanoic acid 251965-88-5P, 4-[3,5-Bis(benzyloxy)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-89-6P, 4-[3-[(3,4-Difluorobenzyl)oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-90-9P, 4-[3-[(4-Methylbenzyl)oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-91-0P, 4-[3-(Benzyloxy)-5-methoxyphenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-92-1P, 4-[3-(Benzyloxy)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-93-2P, 4-[3-[(4-Chlorobenzyl)oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-94-3P, 4-[3-[(3,4-Dichlorobenzyl)oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-95-4P, 4-[3-[(4-Fluorobenzyl)oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-96-5P, 4-[3-[(3-Chlorobenzyl)oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-97-6P, 4-[3-[(4-Methoxybenzyl)oxy]phenyl]-4-oxo-2-butenoic acid 251965-98-7P, 4-[3-(Benzyloxy)-5-hydroxyphenyl]-2-hydroxy-4-oxobut-2-enoic acid 251965-99-8P, 4-[3-(1-Phenylethoxy)phenyl]-4-oxo-2-butenoic acid 251966-00-4P, 4-[3-(Benzyloxy)-5-[[6-[[5-(2-oxohexahydrothieno[3,4-d]imidazol-4-yl)pentanoyl]amino]hexyl]oxy]phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251966-01-5P, 4-[3-[(6-Aminohexyl)oxy]-5-(benzyloxy)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251966-02-6P, 4-(3-Chlorophenyl)-2,4-dioxobutanoic acid 251966-03-7P, 4-[4-(Benzylamino)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251966-04-8P, 4-[2-(Benzyloxy)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251966-05-9P, 4-(Naphthalen-1-yl)-2,4-dioxobutanoic acid 251966-06-0P, 4-[6-(Benzyloxy)-2-oxo-1,2-dihydropyridin-4-yl]-2-hydroxy-4-oxobut-2-enoic acid 251966-07-1P, 4-[2,6-Bis(benzyloxy)pyridin-4-yl]-2,4-dioxobutanoic acid 251966-08-2P, 4-[1-(4-Fluorobenzyl)-5-indolyl]-2-hydroxy-4-oxo-2-butenoic acid 251966-09-3P, 4-[1-(4-Fluorobenzyl)-4-indolyl]-2-hydroxy-4-oxo-2-butenoic acid 251966-10-6P, 4-[4-(Benzyloxy)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251966-11-7P, 4-[1-(4-Fluorobenzyl)-6-indolyl]-2-hydroxy-4-oxo-2-butenoic acid 251966-12-8P, (R)-2,4-Dioxo-4-[3-(1,2,3,4-tetrahydronaphthalen-1-yl)phenyl]butyric acid 251966-13-9P, (S)-2,4-Dioxo-4-[3-(1,2,3,4-tetrahydronaphthalen-1-yl)phenyl]butyric acid 251966-14-0P, 4-[3-Benzyl-4-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid trifluoroacetate 251966-15-1P, 2,4-Dioxo-4-[3-(pyridin-2-ylmethyl)phenyl]butyric acid trifluoroacetate 251966-16-2P,

ylamino)methyl]phenyl]-2,4-dioxobutyric acid 251964-88-2P,
4-[1-(2,6-Difluorobenzyl)-1H-indol-6-yl]-2,4-dioxobutyric acid
251964-89-3P, 4-(1-Benzyl-1H-indol-6-yl)-2,4-dioxobutyric acid
251964-90-6P, 4-[1-(4-Fluorobenzyl)-6-indolyl]-2,4-dioxobutanoic acid
251964-91-7P, 4-[1-(4-Fluorobenzyl)-4-indolyl]-2,4-dioxobutanoic acid
251964-92-8P, 2,4-Dioxo-4-[3-(2,6-difluorobenzyl)phenyl]butyric acid
251964-93-9P, 2,4-Dioxo-4-[3-(2,4,6-trifluorobenzyl)phenyl]butyric acid
251964-94-0P, 2,4-Dioxo-4-[3-(2-fluoro-3-chlorobenzyl)phenyl]butyric acid
251964-95-1P, 2,4-Dioxo-4-[3-(2-methyl-4-fluorobenzyl)phenyl]butyric acid
251964-96-2P, 4-[3-(2,3-Dichlorobenzyl)phenyl]-2,4-dioxobutyric acid
251964-97-3P, 4-[3-(2-Chloro-3-methylbenzyl)phenyl]-2,4-dioxobutyric acid
251964-98-4P, 2,4-Dioxo-4-[3-(2,6-dichlorobenzyl)phenyl]butyric acid
251964-99-5P, 2,4-Dioxo-4-[3-(2,3,4,5,6-pentafluorobenzyl)phenyl]butyric
acid 251965-00-1P, 4-[3-(2-Fluorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-01-2P, 2,4-Dioxo-4-[3-(2-chloro-4-fluorobenzyl)phenyl]butyric acid
251965-02-3P, 4-[3-(2-Methylbenzyl)phenyl]-2,4-dioxobutyric acid
251965-03-4P, 2,4-Dioxo-4-[3-(2-methoxybenzyl)phenyl]butyric acid
251965-04-5P, 4-[3-(2-Bromobenzyl)phenyl]-2,4-dioxobutyric acid
251965-05-6P, 4-[3-(3-Chloro-2-methylbenzyl)phenyl]-2,4-dioxobutyric acid
251965-06-7P, 4-[3-(2,3-Difluorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-07-8P, 4-(3,5-Dibenzylphenyl)-2,4-dioxobutyric acid 251965-08-9P,
2,4-Dioxo-4-[3-[2-(trifluoromethyl)benzyl]phenyl]butyric acid
251965-09-0P, 4-[3-(4-Fluorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-10-3P, 4-[3-(3-Chlorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-11-4P, 2,4-Dioxo-4-[3-(2-bromo-3-chlorobenzyl)phenyl]butyric acid
251965-12-5P, 4-[3-(2-Fluoro-3-methylbenzyl)phenyl]-2,4-dioxobutyric acid
251965-13-6P, 4-[3-(3-Chloro-4-fluorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-14-7P, 2,4-Dioxo-4-[3-(2-bromo-4-fluorobenzyl)phenyl]butyric acid
251965-15-8P, 4-[3-(3-Bromobenzyl)phenyl]-2,4-dioxobutyric acid
251965-16-9P, 4-[3-(2,5-Difluorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-17-0P, 4-[3-(5-Chloro-2-fluorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-18-1P, 4-[3-(3-Methylbenzyl)phenyl]-2,4-dioxobutyric acid
251965-19-2P, 4-(3-Benzyl-4-methylphenyl)-2,4-dioxobutyric acid
251965-20-5P, 4-[3-(3,4-Difluorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-22-7P, 4-[3-(2,5-Dichlorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-24-9P, 4-[3-(2-Chloro-6-methylbenzyl)phenyl]-2,4-dioxobutyric acid
251965-26-1P, 2,4-Dioxo-4-[3-[2-(trifluoromethyl)-4-
chlorobenzyl]phenyl]butyric acid 251965-28-3P, 4-[3-(2-Bromo-5-
chlorobenzyl)phenyl]-2,4-dioxobutyric acid 251965-30-7P,
4-[3-(Naphthalen-1-ylmethyl)phenyl]-2,4-dioxobutyric acid 251965-32-9P,
2,4-Dioxo-4-[3-(3-fluorobenzyl)phenyl]butyric acid 251965-35-2P,
2,4-Dioxo-4-[3-(1-phenylethyl)phenyl]butyric acid 251965-37-4P,
4-(3-Benzyl-4,5-dimethylphenyl)-2,4-dioxobutyric acid 251965-40-9P,
2,4-Dioxo-4-[3-(3-methoxybenzyl)phenyl]butyric acid 251965-45-4P,
4-[3-[(5-Chlorothiophen-2-yl)methyl]phenyl]-2,4-dioxobutyric acid
251965-48-7P, 4-(3-Benzyl-5-methylphenyl)-2,4-dioxobutyric acid
251965-49-8P, 4-[3-(2-Cyanobenzyl)phenyl]-2,4-dioxobutyric acid
251965-50-1P, 4-[3-(3,5-Dichlorobenzyl)phenyl]-2,4-dioxobutyric acid
251965-51-2P, 4-(5-Benzyl-2,4-dimethylphenyl)-2,4-dioxobutyric acid
251965-52-3P, 4-(5-Benzyl-2-methylphenyl)-2,4-dioxobutyric acid
251965-53-4P, 4-[3-(Cyclohexylmethyl)phenyl]-2,4-dioxobutyric acid
251965-54-5P, 4-[3-Benzyl-5-(5-hydroxypentyl)phenyl]-2,4-dioxobutyric acid
251965-55-6P, 4-[3-(3-tert-Butoxy-2-hydroxypropyl)-5-(2-
methylbenzyl)phenyl]-2,4-dioxobutyric acid 251965-56-7P,
2,4-Dioxo-4-[3-(2,3-dimethoxybenzyl)phenyl]butyric acid 251965-57-8P,
4-[3-(Methoxyphenylmethyl)phenyl]-2,4-dioxobutyric acid 251965-58-9P,
4-[3-[Hydroxy(tetrahydrofuran-3-yl)methyl]-5-(2-methylbenzyl)phenyl]-2,4-
dioxobutyric acid 251965-59-0P, 2,4-Dioxo-4-[3-
(phenoxymethyl)phenyl]butyric acid 251965-60-3P 251965-61-4P
251965-62-5P, 4-[3-(Hydroxyphenylmethyl)phenyl]-2,4-dioxobutyric acid

dioxobutyric acid 251964-37-1P, 4-[5-Benzyl-2-(pyrazin-2-yloxy)phenyl]-2,4-dioxobutyric acid 251964-38-2P, 4-[3-Benzyl-5-[(2-oxopiperidin-1-yl)methyl]phenyl]-2,4-dioxobutyric acid 251964-39-3P, 4-[5-Benzyl-2-methoxy-3-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid 251964-40-6P, 4-[3-(2-Chlorobenzyl)-5-(pyridin-2-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-41-7P, 4-[5-Benzyl-2-methoxy-3-[(4-methylpiperazin-1-yl)methyl]phenyl]-2,4-dioxobutyric acid 251964-42-8P, 4-[5-Benzyl-2-(methoxymethyl)phenyl]-2,4-dioxobutyric acid 251964-43-9P, 4-[3-(2-Fluorobenzyl)-5-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid 251964-44-0P, 4-[3-(4-Fluorobenzyl)-5-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid 251964-45-1P, 4-[3-(3-Fluorobenzyl)-5-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid 251964-46-2P 251964-47-3P, 4-[3-Benzyl-5-(1H-1,2,3-triazol-1-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-48-4P, 4-[5-Benzyl-3-(N'-methyl-N-piperazinyl)phenyl]-2,4-dioxobutyric acid 251964-49-5P, 4-[3-Benzyl-5-(1H-1,2,4-triazol-1-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-50-8P, 4-(6-Benzyl-3-oxo-3,4-dihydro-2H-benz[1,4]oxazin-8-yl)-2,4-dioxobutyric acid 251964-51-9P, 4-[5-Benzyl-2-(pyrimidin-2-yloxy)phenyl]-2,4-dioxobutyric acid 251964-52-0P, 4-(5-Benzyl-3-amino-2-methoxyphenyl)-2,4-dioxobutyric acid 251964-53-1P, 4-(5-Benzyl-2-ethoxyphenyl)-2,4-dioxobutyric acid 251964-54-2P, 4-[5-Benzyl-2-(2-morpholin-4-ylethoxy)phenyl]-2,4-dioxobutyric acid 251964-55-3P, 4-[5-Benzyl-2-(2,2,2-trifluoroethoxy)phenyl]-2,4-dioxobutyric acid 251964-56-4P, 4-[5-Benzyl-2-(cyclobutyloxy)phenyl]-2,4-dioxobutyric acid 251964-57-5P, 4-[5-Benzyl-2-(cyclopentyloxy)phenyl]-2,4-dioxobutyric acid 251964-58-6P, 4-[3-Benzyl-5-(tetrazol-2-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-59-7P, 4-(5-Benzyl-2,3-diisopropoxyphenyl)-2,4-dioxobutyric acid 251964-60-0P, 4-[5-Benzyl-2-isopropoxy-3-(N-methylamino)phenyl]-2,4-dioxobutyric acid 251964-61-1P, 4-[5-Benzyl-2-isopropoxy-3-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid 251964-62-2P, 4-[5-Benzyl-2-isopropoxy-3-[2-(N,N-dimethylamino)ethoxy]phenyl]-2,4-dioxobutyric acid 251964-63-3P, 4-[5-Benzyl-2-isopropoxy-3-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid 251964-64-4P, 4-[5-Benzyl-2-isopropoxy-3-[(N,N-dimethylamino)methyl]phenyl]-2,4-dioxobutyric acid 251964-65-5P, 4-(7-Benzylbenzo[1,3]dioxol-5-yl)-2-hydroxy-4-oxobut-2-enoic acid 251964-66-6P, 2-Hydroxy-4-oxo-4-(3-phenylindan-5-yl)but-2-enoic acid 251964-67-7P, 4-[3-(Dibenzylamino)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251964-68-8P, 3-[3-Benzyl-5-(carboxyacetyl)phenyl]-3-oxopropionic acid 251964-69-9P, 4-[4-(Dibenzylamino)phenyl]-2-hydroxy-4-oxobut-2-enoic acid 251964-70-2P, 4-[5-Benzyl-3-methoxy-2-[2-(methylthio)ethoxy]phenyl]-2,4-dioxobutyric acid 251964-71-3P, 4-(7-Benzyl-2,3-dihydrobenzo[1,4]dioxin-5-yl)-2,4-dioxobutyric acid 251964-72-4P, 4-(8-Benzyl-3-hydroxy-3,4-dihydro-2H-benzo[b][1,4]dioxepin-6-yl)-2,4-dioxobutyric acid 251964-73-5P, 4-(2,3-Dimethoxy-5-pent-4-enylphenyl)-2,4-dioxobutyric acid 251964-74-6P, 4-[5-(Cyclopropylmethyl)-2,3-dimethoxyphenyl]-2,4-dioxobutyric acid 251964-76-8P, [6-(Benzyloxy)-1-oxoindan-2-ylidene]hydroxyacetic acid 251964-77-9P, 4-[5-Benzyl-2-isopropoxy-3-(1H-1,2,3-triazol-1-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-79-1P, 4-[5-Benzyl-2-isopropoxy-3-(1H-1,2,4-triazol-1-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-80-4P, 4-[5-Benzyl-2-[3-(N,N-dimethylamino)propoxy]-3-methoxyphenyl]-2,4-dioxobutyric acid 251964-81-5P, 4-[3-(Phenyldifluoromethyl)phenyl]-2,4-dioxobutyric acid 251964-82-6P, 4-[5-Benzyl-2-(cyclopropyloxy)phenyl]-2,4-dioxobutyric acid 251964-83-7P, 4-[5-Benzyl-2-isopropoxy-3-(1-piperidinylmethyl)phenyl]-2,4-dioxobutyric acid 251964-84-8P, 4-[5-Benzyl-2-[2-(dimethylamino)-1-methylethoxy]phenyl]-2,4-dioxobutyric acid 251964-85-9P, 4-[5-Benzyl-2-[(1-methylpiperidin-4-yl)oxy]phenyl]-2,4-dioxobutyric acid 251964-86-0P, 4-[3-Benzyl-5-(4-benzylpiperazin-1-yl)phenyl]-2,4-dioxobutyric acid 251964-87-1P, 4-[5-Benzyl-2-isopropoxy-3-[(pyridin-2-

dioxobutanoic acid 251963-84-5P, 4-[3-[(4-Fluorobenzyl)oxy]phenyl]-2,4-dioxobutanoic acid 251963-85-6P, 4-[3-[(3,4-Difluorobenzyl)oxy]phenyl]-2,4-dioxobutanoic acid 251963-86-7P, 4-[3-[(5-Methylthiophen-2-yl)methyl]phenyl]-2,4-dioxobutyric acid 251963-87-8P, 4-[3-[(Methylphenylamino)methyl]phenyl]-2,4-dioxobutyric acid 251963-88-9P, 4-(3-Benzyl-5-pyrazin-2-ylphenyl)-2,4-dioxobutyric acid 251963-89-0P, 2,4-Dioxo-4-[3-(1,2,3,4-tetrahydronaphthalen-1-yl)phenyl]butyric acid 251963-90-3P, 2,4-Dioxo-4-[3-(phenylsulfanyl)phenyl]butyric acid 251963-91-4P, 4-[3-(2,4-Difluorobenzyl)phenyl]-2,4-dioxobutyric acid 251963-92-5P, 4-[5-(4-Fluorobenzyl)-2,3-dimethoxyphenyl]-2,4-dioxobutyric acid 251963-93-6P, 4-(5-Benzyl-2-isopropoxyphenyl)-2,4-dioxobutyric acid 251963-94-7P, 4-[5-Benzyl-2-[2-(N,N-dimethylamino)ethoxy]phenyl]-2,4-dioxobutyric acid 251963-96-9P, 4-[5-Benzyl-2-(pyridin-2-yloxy)phenyl]-2,4-dioxobutyric acid 251963-98-1P, 4-(5-Benzyl-2-isopropoxy-3-methoxyphenyl)-2,4-dioxobutyric acid 251964-00-8P, 4-(5-Benzyl-2,3-dimethoxyphenyl)-2,4-dioxobutyric acid 251964-01-9P, 4-[5-Benzyl-3-(dimethylamino)-2-methoxyphenyl]-2,4-dioxobutyric acid 251964-02-0P, 4-[5-Benzyl-2-(N,N-dimethylamino)benzoxazol-7-yl]-2,4-dioxobutyric acid 251964-03-1P, 4-[3-Benzyl-5-(pyrazin-2-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-04-2P, 4-[3-Benzyl-5-(2H-1,2,3-triazol-2-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-05-3P, 4-[3-[(3-Chloropyridin-2-yl)methyl]phenyl]-2,4-dioxobutyric acid 251964-06-4P, 4-[5-Benzyl-2-methoxy-3-[(N,N-dimethylamino)methyl]phenyl]-2,4-dioxobutyric acid 251964-07-5P, 4-[5-Benzyl-3-methoxy-2-(2-methoxyethoxy)phenyl]-2,4-dioxobutyric acid 251964-08-6P, 4-(3-Benzyl-4-methoxyphenyl)-2,4-dioxobutyric acid 251964-09-7P, 4-(5-Benzyl-2-methoxyphenyl)-2,4-dioxobutyric acid 251964-10-0P, 4-(3-Benzyl-4-fluorophenyl)-2,4-dioxobutyric acid 251964-11-1P, 4-[3-Benzyl-4-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid 251964-12-2P, 4-[5-(2-Methylbenzyl)-2,3-dimethoxyphenyl]-2,4-dioxobutyric acid 251964-13-3P, 2,4-Dioxo-4-[3-(pyridin-2-ylmethyl)phenyl]butyric acid 251964-14-4P, 4-[5-Benzyl-3-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid 251964-15-5P, 4-(5-Benzyl-3-methoxyphenyl)-2,4-dioxobutyric acid 251964-16-6P, 4-[5-Benzyl-2-(benzyloxy)-3-methoxyphenyl]-2,4-dioxobutyric acid 251964-17-7P, 4-[5-(3-Methylbenzyl)-2,3-dimethoxyphenyl]-2,4-dioxobutyric acid 251964-18-8P, 4-[5-Benzyl-3-(benzyloxy)phenyl]-2,4-dioxobutyric acid 251964-19-9P, 4-[5-Benzyl-2-(2-hydroxyethoxy)phenyl]-2,4-dioxobutanoic acid 251964-20-2P, 2,4-Dioxo-4-[3-(pyridin-3-ylmethyl)phenyl]butyric acid 251964-21-3P, 4-[3-[(3-Methylpyridin-2-yl)methyl]phenyl]-2,4-dioxobutyric acid 251964-22-4P, 4-[5-Benzyl-2-(methylsulfanyl)phenyl]-2,4-dioxobutyric acid 251964-23-5P, 4-(5-Benzyl-3-morpholinophenyl)-2,4-dioxobutyric acid 251964-24-6P, 4-(8-Benzyl-4-methyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-yl)-2,4-dioxobutyric acid 251964-25-7P, 4-[5-(2-Chlorobenzyl)-3-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid 251964-26-8P, 4-[5-(3-Chlorobenzyl)-3-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid 251964-27-9P, 4-(5-Benzyl-2,3,4-trimethoxyphenyl)-2,4-dioxobutyric acid 251964-28-0P, 4-(6-Benzylbenzo[1,3]dioxol-4-yl)-2,4-dioxobutyric acid 251964-29-1P, 4-[3-Benzyl-5-(morpholin-4-ylcarbonyl)phenyl]-2,4-dioxobutyric acid 251964-30-4P, 4-[3-Benzyl-5-(pyridin-2-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-31-5P, 4-[3-Benzyl-5-(morpholinomethyl)phenyl]-2,4-dioxobutyric acid 251964-32-6P, 4-[3-Benzyl-5-(pyridin-3-ylmethyl)phenyl]-2,4-dioxobutyric acid 251964-33-7P, 4-[3-Benzyl-5-[2-(dimethylamino)-1-hydroxy-1-methylethyl]phenyl]-2,4-dioxobutyric acid 251964-34-8P, 4-[5-Benzyl-2-(N,N-dimethylamino)phenyl]-2,4-dioxobutyric acid 251964-35-9P, 4-(5-Benzyl-2-fluorophenyl)-2,4-dioxobutyric acid 251964-36-0P, 4-[5-Benzyl-3-(hydroxymethyl)-2-methoxyphenyl]-2,4-

dimethylamino)methyl]acetophenone 251966-77-5P, 1-[3-Bromo-4-(2-methoxyethoxy)-5-methoxyphenyl]-1-phenylmethanol 251966-78-6P, 1-[3-Bromo-4-(2-methoxyethoxy)-5-methoxyphenyl]-1-phenylmethane 251966-79-7P, 1-[2-(2-Methoxyethoxy)-3-methoxy-5-(phenylmethyl)phenyl]-1-ethanone 251966-80-0P, Ethyl 4-[5-benzyl-3-methoxy-2-(2-methoxyethoxy)phenyl]-2,4-dioxobutyrate 251966-81-1P, [6-(Benzyloxy)-1-oxoindan-2-ylidene]hydroxyacetic acid ethyl ester 251966-82-2P, 6-Bromo-1-(4-fluorobenzyl)indole 251966-83-3P, 1-[1-(4-Fluorobenzyl)-6-indolyl]ethanone 251966-84-4P, 4-[1-(4-Fluorobenzyl)-6-indolyl]-2,4-dioxobutanoic acid methyl ester 251967-46-1P, 5-Benzyl-2-methoxy-3-(N,N-dimethylamino)acetophenone
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of aromatic and heteroarom. aryldioxobutyric acid derivs. as **HIV** integrase inhibitors)

IT 52350-85-3, Integrase
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(preparation of aromatic and heteroarom. aryldioxobutyric acid derivs. as **HIV** integrase inhibitors)

IT 62-53-3, Benzenamine, reactions 95-92-1, Diethyl oxalate 99-03-6 99-92-3 100-39-0 100-51-6, Benzyl alcohol, reactions 100-52-7, Benzaldehyde, reactions 100-58-3, Phenylmagnesium bromide 108-36-1, 1,3-Dibromobenzene 108-98-5, Thiophenol, reactions 111-34-2, Butyl vinyl ether 121-71-1 288-36-8, 1,2,3-Triazole 352-13-6, 4-Fluorophenylmagnesium bromide 459-46-1, 4-Fluorobenzyl bromide 553-90-2, Dimethyl oxalate 626-39-1, 1,3,5-Tribromobenzene 2973-76-4, 5-Bromovanillin 3132-99-8, 3-Bromobenzaldehyde 3647-69-6, 4-(2-Chloroethyl)morpholine hydrochloride 6482-24-2, 2-Bromoethyl methyl ether 6948-30-7, 5-Bromoveratraldehyde 13679-70-4, 5-Methyl-2-thiophenecarboxaldehyde 14452-30-3, 3'-Iodoacetophenone 14508-49-7, Chloropyrazine 23915-07-3, α-Bromo-2,4-difluorotoluene 28924-21-2, 1-[3,5-Bis(benzyloxy)phenyl]ethanone 31165-67-0, 2-(Benzyloxy)acetophenone 52415-29-9, 6-Bromoindole 52488-36-5, 4-Bromoindole 62803-47-8, 6-Hydroxyindan-1-one 78191-00-1, N-Methoxy-N-methylacetamide 85118-01-0, 3,4-Difluorobenzyl bromide 142356-33-0, (6-Bromohexyl)carbamic acid tert-butyl ester
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of aromatic and heteroarom. aryldioxobutyric acid derivs. as **HIV** integrase inhibitors)

IT 251966-34-4P, Methyl 4-(3-benzylphenyl)-2,4-dioxobutyrate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(target compound; preparation of aromatic and heteroarom. aryldioxobutyric acid derivs. as **HIV** integrase inhibitors)

IT 85763-16-2P, 4-(Biphenyl-4-yl)-2,4-dioxobutanoic acid 105356-61-4P, 4-(Naphthalen-2-yl)-2,4-dioxobutanoic acid 251963-74-3P, 4-[3,5-Bis(benzyloxy)phenyl]-2,4-dioxobutanoic acid 251963-75-4P, 4-[3-(Benzyloxy)-5-(2-morpholin-4-ylethoxy)phenyl]-2,4-dioxobutanoic acid 251963-76-5P, 4-[3-(Benzyloxy)-5-[[6-[(tert-butoxycarbonyl)amino]hexyl]oxy]phenyl]-2,4-dioxobutanoic acid 251963-77-6P, 4-(3-Benzylphenyl)-2,4-dioxobutanoic acid 251963-78-7P, 4-[3-(2-Chlorobenzyl)phenyl]-2,4-dioxobutanoic acid 251963-79-8P, 4-[4-(Dibenzylamino)phenyl]-2,4-dioxobutanoic acid 251963-80-1P, 4-[3-(Dibenzylamino)phenyl]-2,4-dioxobutanoic acid 251963-81-2P, 4-[3-(Benzyloxy)-5-methoxyphenyl]-2,4-dioxobutanoic acid 251963-82-3P, 4-[3-(Benzyloxy)phenyl]-2,4-dioxobutanoic acid 251963-83-4P, 4-[2-(Benzyloxy)phenyl]-2,4-

HIV integrase inhibitors)
IT 251966-85-5P, 3-Benzyl-5-(1H-1,2,3-triazol-1-ylmethyl)-1-bromobenzene
RL: BYP (Byproduct); PREP (Preparation)
(byproduct; preparation of aromatic and heteroarom. aryldioxobutyric acid derivs. as HIV integrase inhibitors)
IT 150378-17-9, Indinavir
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. also containing; preparation of aromatic and heteroarom. aryldioxobutyric
acid derivs. as HIV integrase inhibitors)
IT 144114-21-6, Retropepsin
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(inhibitors, compns. also containing; preparation of aromatic and heteroarom.
aryldioxobutyric acid derivs. as HIV integrase inhibitors)
IT 16547-15-2P, (3-Bromobenzyl)methylphenylamine 25083-80-1P, 6-(Benzyloxy)indan-1-one 26388-18-1P, 1-[3-(Phenylsulfanyl)phenyl]ethanone 27798-39-6P, 3-Benzylphenyl bromide 34068-01-4P, 1-[3-(Benzyloxy)phenyl]ethanone 51339-31-2P, (3,5-Dibromophenyl)phenylmethanol 63012-04-4P, (3-Bromophenyl)phenylmethanol 71572-36-6P, 3-Bromo-5-benzylbromobenzene 74209-15-7P, 1-[3-(Benzyloxy)-5-methoxyphenyl]ethanone 74857-56-0P, 1-(3-Benzylphenyl)ethanone 81732-54-9P, 1-[3-(Benzyloxy)-5-hydroxyphenyl]ethanone 84754-32-5P, 1-[4-(Dibenzylamino)phenyl]ethanone 87154-51-6P, 3-Bromo-4-(2-methoxyethoxy)-5-methoxybenzaldehyde 144337-72-4P, 1-[3-[(4-Fluorobenzyl)oxy]phenyl]ethanone 251966-44-6P, 4-[3,5-Bis(benzyloxy)phenyl]-2,4-dioxobutanoic acid methyl ester 251966-45-7P, 4-[2-[3-Acetyl-5-(benzyloxy)phenoxy]ethyl]morpholine 251966-46-8P, [6-[3-Acetyl-5-(benzyloxy)phenoxy]hexyl]carbamic acid tert-butyl ester 251966-47-9P, 4-[3-(Benzyloxy)-5-[[6-[(tert-butoxycarbonyl)amino]hexyl]oxy]phenyl]-2,4-dioxobutanoic acid methyl ester 251966-48-0P, 4-[4-(Dibenzylamino)phenyl]-2,4-dioxobutanoic acid ethyl ester 251966-49-1P, 1-[3-(Dibenzylamino)phenyl]ethanone 251966-50-4P, 4-[3-(Dibenzylamino)phenyl]-2,4-dioxobutanoic acid ethyl ester 251966-51-5P, 2-(3-Bromobenzyl)-5-methylthiophene 251966-52-6P, 1-[3-[(5-Methylthiophen-2-yl)methyl]phenyl]ethanone 251966-53-7P, (3-Bromobenzyl)phenylamine 251966-54-8P, 1-[3-[(Methylphenylamino)methyl]phenyl]ethanone 251966-55-9P, 2-(3-Benzyl-5-bromophenyl)pyrazine 251966-56-0P, 1-(3-Benzyl-5-pyrazin-2-ylphenyl)ethanone 251966-57-1P, (R)-2,4-Dioxo-4-[3-(1,2,3,4-tetrahydronaphthalen-1-yl)phenyl]butyric acid ethyl ester 251966-58-2P, (S)-2,4-Dioxo-4-[3-(1,2,3,4-tetrahydronaphthalen-1-yl)phenyl]butyric acid ethyl ester 251966-59-3P, 1-[3-(2,4-Difluorobenzyl)phenyl]ethanone 251966-60-6P, (3-Bromo-4,5-dimethoxyphenyl)(4-fluorophenyl)methanol 251966-61-7P, (3-Bromo-4,5-dimethoxyphenyl)(4-fluorophenyl)methane 251966-62-8P, 1-[5-(4-Fluorobenzyl)-2,3-dimethoxyphenyl]ethanone 251966-63-9P, 5-Benzyl-2-isopropoxyacetophenone 251966-64-0P, 5-Benzyl-2-isopropoxybenzonitrile 251966-65-1P, Methyl 4-[5-benzyl-2-(pyridin-2-yloxy)phenyl]-2,4-dioxobutyrate 251966-66-2P, 5-Benzyl-2-isopropoxy-3-methoxyacetophenone 251966-67-3P, Ethyl 4-(5-benzyl-2,3-dimethoxyphenyl)-2,4-dioxobutyrate 251966-68-4P, 7-Acetyl-5-benzyl-2-(N,N-dimethylamino)benzoxazole 251966-69-5P, 3-Benzyl-5-(pyrazin-2-ylmethyl)acetophenone 251966-70-8P, 3-Benzyl-5-(2H-1,2,3-triazol-2-ylmethyl)-1-bromobenzene 251966-71-9P, 3-Benzyl-5-bromobenzyl bromide 251966-72-0P, 3-Benzyl-5-(2H-1,2,3-triazol-2-ylmethyl)acetophenone 251966-73-1P, 3-[(3-Chloropyridin-2-yl)methyl]-1-bromobenzene 251966-74-2P, 3-Chloropyridin-2-yl 3-bromophenyl ketone 251966-75-3P, 3-[(3-Chloropyridin-2-yl)methyl]acetophenone 251966-76-4P, 5-Benzyl-2-methoxy-3-[(N,N-

MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM,
TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

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US 6380249	B1	20020430	US 1999-323417		19990601
JP 2002516863	T2	20020611	JP 2000-551776		19990601
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			WO 1999-US12093	W	19990601

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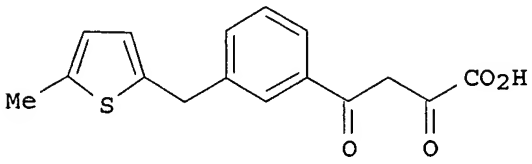


II

AB Certain six-membered aromatic and heteroarom. 2,4-dioxobutyric acid derivs. are described, specifically compds. ArCOCH2COCO2R [I; Ar = certain (un)substituted (hetero)aromatic groups; R = H, C1-6 alkyl]. I are inhibitors of HIV integrase, and are useful as inhibitors of HIV replication. The compds. are thus useful in the prevention or treatment of infection by HIV and the treatment of AIDS, either as compds., pharmaceutically acceptable salts, pharmaceutical composition ingredients, whether or not in combination with other antivirals [e.g., the HIV protease inhibitor indinavir], immunomodulators, antibiotics or vaccines. Methods of treating AIDS and methods of preventing or treating infection by HIV are also described. Over 200 specific compds. were prepared and/or claimed. For instance, title compound II was prepared as follows: (1) lithiation of 1,3-dibromobenzene and reaction with 5-methylthiophene-2-carboxaldehyde; (2) reduction of the resultant alc. with Et3SiH to give 2-(3-bromobenzyl)-5-methylthiophene; (3) lithiation of the latter bromide and acetylation with AcN(Me)OMe; (4) condensation of the resultant Me ketone with di-Et oxalate; and (5) alkaline hydrolysis of the obtained Et ester. Representative compds. I inhibited HIV replication in T-lymphoid cells with IC95 values < 10 μM, and had IC50 values of < 1 μM in reference integrase and preintegration complex assays (no addnl. data).

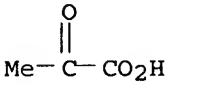
IC A61K031-534; A01N037-08; A01N037-12; A01N043-02; A01N043-06; A01N043-26; A01N043-32; A01N043-38; A01N043-40; A01N043-54; A01N043-65; A01N043-58; A01N043-60; A01N043-64; A01N043-76; A01N043-82; A01N053-00; C07C059-74; C07C059-76; C07C059-90

CC 25-17 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 1, 10, 27, 28

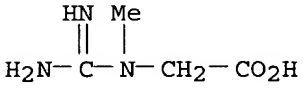
ST aryldioxobutyrate prepn inhibitor **HIV** integrase; antiviral dioxobutyrate aryl heteroaryl prepn

IT Anti-**AIDS** agents
Antiviral agents
Human immunodeficiency virus 1
(preparation of aromatic and heteroarom. aryldioxobutyric acid derivs. as

(Biological study); PROC (Process)
(pyruvate for augmenting inotropic effect of β-adrenergic agonist)
IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvate for augmenting inotropic effect of β-adrenergic agonist)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



IT **57-00-1**, Creatine
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pyruvate for augmenting inotropic effect of β-adrenergic agonist)
RN 57-00-1 HCAPLUS
CN Glycine, N-(aminoiminomethyl)-N-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 56 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:783939 HCAPLUS
DOCUMENT NUMBER: 132:22755
TITLE: Preparation of aromatic and heteroaromatic 4-aryl-2,4-dioxobutyric acid derivatives useful as **HIV** integrase inhibitors
INVENTOR(S): Young, Steven D.; Egbertson, Melissa; Payne, Linda S.; Wai, John S.; Fisher, Thorsten E.; Guare, James P., Jr.; Embrey, Mark W.; Tran, Lee; Zhuang, Linghang; Vacca, Joseph P.; Langford, Marie; Melamed, Jeffrey; Clark, David L.; Medina, Julio C.; Jaen, Juan
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: PCT Int. Appl., 319 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9962520	A1	19991209	WO 1999-US12093	19990601

W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV,

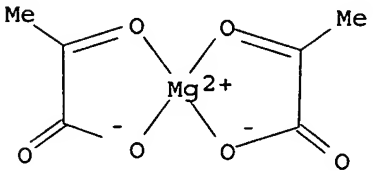
ACCESSION NUMBER: 2000:335233 HCAPLUS
DOCUMENT NUMBER: 132:318037
TITLE: Method for augmenting the inotropic effects of β-adrenergic agonists using pyruvate therapy
INVENTOR(S): Mallet, Robert T.; Caffrey, James L.; Tejero-Taldo, Maria Isabel
PATENT ASSIGNEE(S): My-Tech, Inc., USA
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000027384	A1	20000518	WO 1999-US26745	19991112
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6153647	A	20001128	US 1998-190814	19981112
PRIORITY APPLN. INFO.:			US 1998-190814 A	19981112

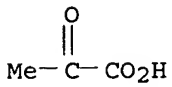
AB A method is provided for treating medical patients suffering from cardiac trauma by co-administering pyruvate with a β-adrenergic agonist. This method for treating cardiac trauma, e.g. ischemic reperfusion injury and heart failure, augments the inotropic effects of β-adrenergic agents. Typical β-adrenergic agonists are epinephrine, norepinephrine, dobutamine, and isoproterenol. The amount of β-adrenergic agonist necessary to achieve a 50% increase of cardiac power is diminished five-fold when co-administered with pyruvate. Since high concns. of agonists have many detrimental and hazardous side effects in patients, this invention would have important applications in the treatment of patients with cardiac trauma, e.g. ischemia reperfusion injury.

IC ICM A61K031-19
ICS A61K031-22
CC 1-8 (Pharmacology)
IT Anti-ischemic agents
Cardiovascular agents
Energy metabolism, animal
Heart
Inotropics
Phosphorylation, biological
(pyruvate for augmenting inotropic effect of β-adrenergic agonist)
IT **113-24-6**, Sodium pyruvate 127-17-3, biological studies
7683-59-2, Isoproterenol
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvate for augmenting inotropic effect of β-adrenergic agonist)
IT 56-65-5, Adenosine triphosphate, biological studies **57-00-1**, Creatine 67-07-2, Phosphocreatine 70-18-8, Reduced glutathione, biological studies 27025-41-8, Oxidized glutathione
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

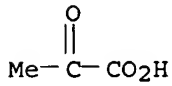
RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



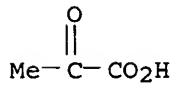
IT **113-24-6**, Sodium pyruvate **4151-33-1**, Potassium pyruvate
52009-14-0, Calcium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**;
BIOL (Biological study); USES (Uses)
(pharmaceutical composition for dietary use comprising pyruvate and unripe bitter orange extract)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



L102 ANSWER 55 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN

L102 ANSWER 54 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:420754 HCAPLUS
DOCUMENT NUMBER: 133:48887
TITLE: Pharmaceutical composition for dietary use comprising a pyruvate and unripe bitter orange extract
INVENTOR(S): Villa, Claudio
PATENT ASSIGNEE(S): Roeder 1956 Farmaceutici S.p.A., Italy
SOURCE: Eur. Pat. Appl., 4 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

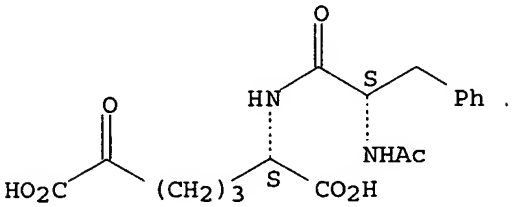
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1010429	A2	20000621	EP 1999-124745	19991213
EP 1010429	A3	20011128		
EP 1010429	B1	20031029		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
IT 1303578	B1	20001114	IT 1998-TO1037	19981211
AT 252908	E	20031115	AT 1999-124745	19991213
PT 1010429	T	20040331	PT 1999-124745	19991213
PRIORITY APPLN. INFO.:			IT 1998-TO1037 A	19981211

AB The pharmaceutical composition, in particular for dietary use comprises at least 1 derivative of pyruvic acid and unripe bitter orange extract In particular, the pyruvic acid derivative is a pyruvate or a product of the reaction of pyruvic acid with an amino acid, preferably magnesium pyruvate or pyruvoyl glycine. The composition displays a synergistic effect which can increase loss of body weight, reducing only the fatty mass, and which can prevent inhibition of the metabolism and the appearance of the yo-yo effect. Thus, a composition contained unripe bitter orange extract 150, Mg pyruvate 667, vitamin B1 0.7, vitamin B6 0.6, and natural vitamin C 20 mg, chromium 16.6 μg.

IC ICM A61K035-78
ICI A61K035-78, A61K031-19
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 17, 18
IT 3997-91-9, Pyruvoyl glycine **18983-79-4**, Magnesium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pharmaceutical composition for dietary use comprising pyruvate and unripe bitter orange extract)
IT **113-24-6**, Sodium pyruvate 127-17-3D, Pyruvic acid, derivs. **4151-33-1**, Potassium pyruvate **52009-14-0**, Calcium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pharmaceutical composition for dietary use comprising pyruvate and unripe bitter orange extract)
IT **18983-79-4**, Magnesium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pharmaceutical composition for dietary use comprising pyruvate and unripe bitter orange extract)

(9CI) (CA INDEX NAME)

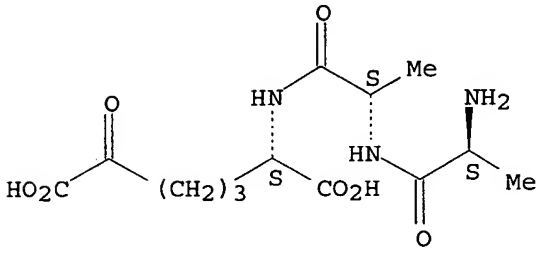
Absolute stereochemistry.



●2 Li

RN 294871-75-3 HCAPLUS
CN L-Norleucine, L-alanyl-L-alanyl-6-carboxy-6-oxo-, dilithium salt (9CI) (CA INDEX NAME)

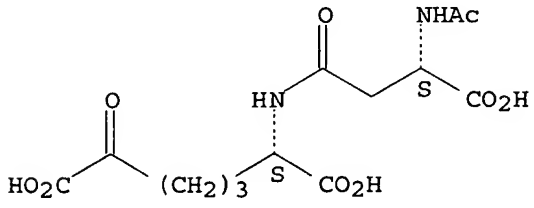
Absolute stereochemistry.



●2 Li

RN 294871-79-7 HCAPLUS
CN L-Norleucine, N-acetyl-L-β-aspartyl-6-carboxy-6-oxo-, trilithium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



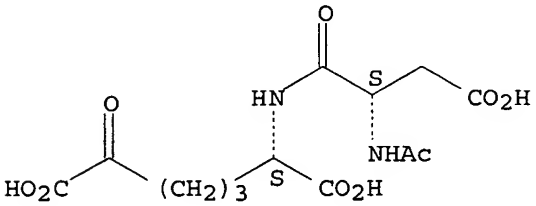
●3 Li

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

derivatives of **bacterial** cell wall biosynthesis inhibitors

AUTHOR(S): Cox, Russell J.; Jenkins, Helen; Schouten, James A.; Stentiford, Rosie A.; Wareing, Katrina J.
CORPORATE SOURCE: School of Chemistry, University of Bristol, Clifton, Bristol, BS8 1TS, UK
SOURCE: Perkin 1 (2000), (13), 2023-2036
CODEN: PERKF9; ISSN: 1470-4358
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The enzyme succinyldiaminopimelate aminotransferase (DAP-AT; E.C. 2.6.1.17) is a good potential target for the design of novel antibacterial agents. The authors have synthesized a series of hydrazino peptides based on the structure of the natural substrate of DAP-AT. These compds. show varied inhibition properties in vitro vs. DAP-AT from E. coli as well as moderate antimicrobial activity vs. E. coli. Examination of the kinetics of inhibition reveals that hydrazine, as well as the substituted hydrazino peptides, shows two-phase slow-binding inhibition. Possible mechanisms for inhibition are discussed.
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1, 7, 10
IT **208645-71-0P 208645-72-1P 294871-75-3P 294871-79-7P**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of hydrazino peptides as antibiotics and inhibitors of succinyldiaminopimelate aminotransferase)
IT **208645-71-0P 208645-72-1P 294871-75-3P 294871-79-7P**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of hydrazino peptides as antibiotics and inhibitors of succinyldiaminopimelate aminotransferase)
RN 208645-71-0 HCAPLUS
CN L-Norleucine, N-acetyl-L-α-aspartyl-6-carboxy-6-oxo-, trilithium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



●3 Li

RN 208645-72-1 HCAPLUS
CN L-Norleucine, N-acetyl-L-phenylalanyl-6-carboxy-6-oxo-, dilithium salt

JP 2000204038	A2	20000725	JP 1999-5736	19990112
JP 3130295	B2	20010131		
PRIORITY APPLN. INFO.:			JP 1999-5736	19990112

AB The agents for treatment of pyruvate deficiency and/or hyperlactacidemia caused from alc. intake, muscular exercise, diabetes, and hypoxia due to cardiac and cerebral infarctions, contain Na pyruvate (I) at 30-400 mg/kg/day as pyruvic acid. An aqueous solution of 11 g I was orally administered to healthy male volunteers after 60 and 90 min from the beginning of the test while 40 g whisky was taken just at the beginning and after 30 min. Blood alc. was remarkably decreased after 2nd dosing of I. Administration of the solution also effective to relieve headache, nausea, malaise, thirsty, etc., due to drinking of whisky.

IC ICM A61K031-19
ICS A61P003-00; A61P043-00

CC 1-10 (Pharmacology)
Section cross-reference(s): 4, 14

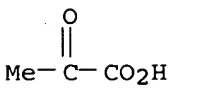
ST pyruvate hyperlactacidemia pyruvate deficiency treatment; lactic acid excess treatment sodium pyruvate; alc intake hyperlactacidemia treatment sodium pyruvate; exercise hyperlactacidemia treatment sodium pyruvate; **diabetes** hyperlactacidemia treatment sodium pyruvate; brain heart infarction hyperlactacidemia treatment sodium pyruvate; hypoxia hyperlactacidemia treatment sodium pyruvate

IT Alcoholic beverages
Diabetes mellitus
Exercise
(treatment of pyruvate deficiency and/or hyperlactacidemia by administration of sodium pyruvate)

IT **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(treatment of pyruvate deficiency and/or hyperlactacidemia by administration of sodium pyruvate)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(treatment of pyruvate deficiency and/or hyperlactacidemia by administration of sodium pyruvate)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



Na

L102 ANSWER 53 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:426626 HCAPLUS
DOCUMENT NUMBER: 133:252696
TITLE: Synthesis and in vitro enzyme activity of peptide

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(peroxidn.; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)

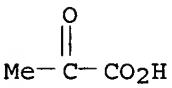
IT Cations
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(transport; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)

IT 50-70-4, Sorbitol, biological studies 50-99-7, D-Glucose, biological studies 56-65-5, 5'-ATP, biological studies 57-48-7, D-Fructose, biological studies 70-18-8, GSH, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 52 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:501811 HCAPLUS
DOCUMENT NUMBER: 133:99582
TITLE: Prophylactic and therapeutic agents for pyruvate deficiency and hyperlactacidemia, containing sodium pyruvate
INVENTOR(S): Tanaka, Masatsugu
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

AUTHOR(S): Zhao, W.; Devamanoharan, P. S.; Henein, M.; Ali, A. H.; Varma, S. D.
CORPORATE SOURCE: Departments of Ophthalmology and Biological Chemistry, School of Medicine, University of Maryland, Baltimore, MD, USA
SOURCE: Diabetes, Obesity and Metabolism (2000), 2(3), 165-174
CODEN: DOMEF6; ISSN: 1462-8902
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies have been conducted to determine the effect of pyruvate administration on the biochem. of rat lens and the status of its transparency as affected by diabetic conditions. Sprague-Dawley rats were rendered diabetic by i.v. injection of streptozotocin (55 mg/kg body weight (b.w.)) and treated with sodium pyruvate (2%) in drinking water. The levels of glucose, fructose, sorbitol, ATP, GSH, MDA as well as glycated proteins in the lenses were determined at various intervals after the onset of diabetes and the values compared with untreated diabetic controls. The progress of cataract formation and associated histol. changes in the tissue were also monitored. Studies show that the pyruvate treatment decreased the extent of several biochem. changes known to be associated with cataract formation, such as the elevation in the levels of glycated proteins, sorbitol, lipid peroxidn. (MDA) and inhibition of the cation pump. The progress of cataract was also significantly delayed. Exogenous administration of this compound hence was found to exert an overall protective effect against cataract formation induced by the diabetic conditions.
CC 1-12 (Pharmacology)
Section cross-reference(s): 14
ST **diabetes** eye lens biochem cataractogenesis pyruvate
IT Transport proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cation-transporting; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT Biological transport
(cation; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT **Diabetes** mellitus
(**diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT Glycoproteins, general, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT Cataract
(**diabetic**; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT Hemoglobins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(glycohemoglobins; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT Eye
(lens; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT Peroxidation
(lipid; **diabetes**-induced biochem. changes in rat lens and attenuation of cataractogenesis by pyruvate)
IT Lipids, biological studies

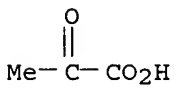
Spleen, **neoplasm**
(lymphoma, inhibitors; pyrimidine-based nucleoside for treatment of mitochondrial disorder)

IT **Kidney, disease**
(tubular acidosis; pyrimidine-based nucleoside for treatment of mitochondrial disorder)

IT 51-35-4D, L-Hydroxyproline, pyrimidine nucleoside derivs. 52-90-4D, L-Cysteine, pyrimidine nucleoside derivs., biological studies 56-40-6D, Glycine, pyrimidine nucleoside derivs., biological studies 56-41-7D, L-Alanine, pyrimidine nucleoside derivs., biological studies 56-45-1D, L-Serine, pyrimidine nucleoside derivs., biological studies 56-84-8D, L-Aspartic acid, pyrimidine nucleoside derivs., biological studies 56-86-0D, L-Glutamic acid, pyrimidine nucleoside derivs., biological studies 56-87-1D, L-Lysine, pyrimidine nucleoside derivs., biological studies 56-89-3D, L-Cystine, pyrimidine nucleoside derivs., biological studies 58-85-5, Biotin 59-30-3, Folic acid, biological studies 59-43-8, Vitamin B1, biological studies 59-67-6, Niacin, biological studies 60-18-4D, L-Tyrosine, pyrimidine nucleoside derivs., biological studies 61-90-5D, L-Leucine, pyrimidine nucleoside derivs., biological studies 68-19-9, Vitamin B12 70-26-8D, L-Ornithine, pyrimidine nucleoside derivs. 71-00-1D, L-Histidine, pyrimidine nucleoside derivs., biological studies 72-18-4D, L-Valine, pyrimidine nucleoside derivs., biological studies 72-19-5D, L-Threonine, pyrimidine nucleoside derivs., biological studies 73-32-5D, L-Isoleucine, pyrimidine nucleoside derivs., biological studies 74-79-3D, L-Arginine, pyrimidine nucleoside derivs., biological studies 79-83-4, Pantothenic acid 83-88-5, Vitamin B2, biological studies 147-85-3D, L-Proline, pyrimidine nucleoside derivs., biological studies 541-15-1D, L-Carnitine, pyrimidine nucleoside derivs. 4105-38-8 8059-24-3, Vitamin B6 **52009-14-0**
, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyrimidine-based nucleoside for treatment of mitochondrial disorder)

IT **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyrimidine-based nucleoside for treatment of mitochondrial disorder)

RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 51 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:516710 HCAPLUS
DOCUMENT NUMBER: 133:344571
TITLE: **Diabetes**-induced biochemical changes in rat lens: Attenuation of cataractogenesis by pyruvate

L102 ANSWER 50 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:608584 HCAPLUS
DOCUMENT NUMBER: 133:187987
TITLE: Methods using pyrimidine-based nucleosides for treatment of mitochondrial disorders
INVENTOR(S): Naviaux, Robert K.
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050043	A1	20000831	WO 2000-US4663	20000223
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2362925	AA	20000831	CA 2000-2362925	20000223
NZ 513926	A	20010928	NZ 2000-513926	20000223
BR 2000008447	A	20020115	BR 2000-8447	20000223
EP 1171137	A1	20020116	EP 2000-910321	20000223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002537340	T2	20021105	JP 2000-600654	20000223
AU 776437	B2	20040909	AU 2000-32434	20000223
CN 1626107	A	20050615	CN 2004-10078405	20000223
RU 2268732	C2	20060127	RU 2001-125913	20000223
US 2004224920	A1	20041111	US 2004-868717	20040614
AU 2004235661	A1	20050127	AU 2004-235661	20041206
PRIORITY APPLN. INFO.:			US 1999-121588P P	19990223
			WO 2000-US4663 W	20000223
			US 2001-889251 A1	20011101

OTHER SOURCE(S): MARPAT 133:187987

AB Methods are provided for the treatment of mitochondrial disorders. The methods include the administration of a pyrimidine-based nucleoside, e.g. triacetyluridine. Also provided are methods of reducing or eliminating symptoms associated with mitochondrial disorders. Mitochondrial disorders particularly appropriate for treatment include those attributable to a deficiency of one or more pyrimidines.

IC ICM A61K031-70
CC 1-12 (Pharmacology)
IT Brain, disease
(MELAS (mitochondrial myopathy, encephalopathy, lactic acidosis, and **stroke**-like episodes); pyrimidine-based nucleoside for treatment of mitochondrial disorder)
IT Mental disorder
(**dementia**; pyrimidine-based nucleoside for treatment of mitochondrial disorder)
IT Antidiabetic agents
(**diabetes** mellitus lactic acidemia; pyrimidine-based nucleoside for treatment of mitochondrial disorder)
IT Spleen, **neoplasm**

pyruvate 6.7 g. This formulation was a superior radical scavenger than either dl-α-tocopherol or a tocopherol mixture alone.

IC ICM A61K031-355

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 17

IT Cytokines
Interleukin 1
Interleukin 6
Interleukin 8
Tumor necrosis factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(inhibition or reduction of; tocotrienol-based antioxidant formulations for therapeutic uses and as food additives)

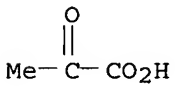
IT Aging, animal
Anti-inflammatory agents
Antidiabetic agents
Cardiovascular agents
Eye, disease
Food additives
Kidney, disease
Liver, disease
Nervous system agents
Oxidative stress, biological
Radical scavengers
(tocotrienol-based antioxidant formulations for therapeutic uses and as food additives)

IT 50-81-7, Ascorbic acid, biological studies 50-81-7D, Ascorbic acid, derivs. and salts 73-31-4, Melatonin 74-79-3, L-Arginine, biological studies **113-24-6**, Sodium pyruvate 137-66-6, Ascorbyl palmitate 1200-22-2, α-Lipoic acid 1200-22-2D, α-Lipoic acid, derivs. and salts 1210-83-9, N-Acetylserotonin 6829-55-6, Tocotrienol 10191-41-0, dl-α-Tocopherol
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(tocotrienol-based antioxidant formulations for therapeutic uses and as food additives)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(tocotrienol-based antioxidant formulations for therapeutic uses and as food additives)

RN 113-24-6 HCAPLUS

CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



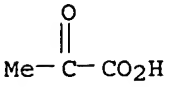
Na

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

(Lactobacillus acidophilus viable cell enumeration in presence of thermophilic lactic acid **bacteria** and bifidobacteria)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(Lactobacillus acidophilus viable cell enumeration in presence of thermophilic lactic acid **bacteria** and bifidobacteria)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

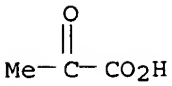
L102 ANSWER 49 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:706980 HCAPLUS
DOCUMENT NUMBER: 133:271715
TITLE: Tocotrienol-based antioxidant formulations for therapeutic uses and as food additives
INVENTOR(S): Schneider, F. Howard; Lane, Ronald H.; Avila, Timothy
PATENT ASSIGNEE(S): Lipogenics, Inc., USA
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000057876	A1	20001005	WO 2000-US7733	20000324

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-126255P P 19990326

AB This invention relates to novel antioxidant formulations and methods for using them. The antioxidant formulations comprise a combination of a free radical scavenger (FRS), a radical scavenger recycler (RSR) and optionally, a radical formation inhibitor (RFI). The formulations of this invention may be used in pharmaceutical compns., foodstuffs, food additives and dietary supplements. In addition, this invention relates to the use of the antioxidant formulations to inhibit oxidative damage and to treat and prevent disorders associated with oxidative damage caused by free radicals. A formulation contained a tocotrienol mixture 5.0 g, ascorbic acid 3.3 g, palmityl ascorbate 1.0 g, α-lipoic acid 3.3 g, and Na



●1/2 Ca

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

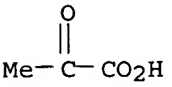
L102 ANSWER 48 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:821307 HCAPLUS
DOCUMENT NUMBER: 134:190311
TITLE: Method of Lactobacillus acidophilus viable cell enumeration in the presence of thermophilic lactic acid **bacteria** and bifidobacteria
AUTHOR(S): Bielecka, M.; Biedrzycka, E.; Majkowska, A.; Biedrzycka, El.
CORPORATE SOURCE: Department of Food Microbiology, Division of Food Science, Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences, Olsztyn, 10-747, Pol.
SOURCE: Progress in Biotechnology (2000), 17(Food Biotechnology), 399-404
CODEN: PBITE3; ISSN: 0921-0423
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Six media were evaluated taking into consideration their selectivity for enumeration of Lactobacillus acidophilus in the presence of traditional yogurt cultures (Lactobacillus delbrueckii subsp. bulgaricus, Streptococcus thermophilus) and bifidobacteria strains com. used as well as freshly isolated from human and animal gut. Minimal nutrient agars BCP and MNA were used as base media. BCP medium was supplemented with penicillin and sodium pyruvate as selective agents or with 0.25-1.0% salicin instead of 0.1% glucose. MNA medium contained 1% salicin. Nutritive media MRS, M17 or Garche's were used as controls. The BCP agar with glucose replaced with 0.5 or 1.0% salicin was chosen as the most suitable for L. acidophilus selective enumeration in bio-yogurts due to high recovery of L. acidophilus strains (89-100%), along with good visibility of their colonies surrounded by yellow aureole, and enough prevention from forming colonies by concomitant bacteria.

CC 9-16 (Biochemical Methods)
IT Bifidobacterium
Growth, microbial
Lactobacillus acidophilus
Lactobacillus delbrueckii bulgaricus
Streptococcus thermophilus
(Lactobacillus acidophilus viable cell enumeration in presence of thermophilic lactic acid **bacteria** and bifidobacteria)
IT Culture media
(selective; Lactobacillus acidophilus viable cell enumeration in presence of thermophilic lactic acid **bacteria** and bifidobacteria)
IT 61-33-6, biological studies **113-24-6**, Sodium pyruvate
138-52-3, Salicin
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)

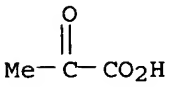
(Biological study); USES (Uses)
(pyruvate or other antioxidant inflammatory response mediator for treating mammalian nasal and sinus disease caused by inflammatory response)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



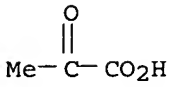
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



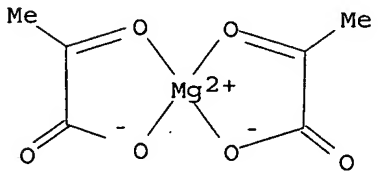
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

WO 2000069431	A1	20001123	WO 2000-US10062		20000414
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
CA 2373611	AA	20001123	CA 2000-2373611		20000414
EP 1183022	A1	20020306	EP 2000-925997		20000414
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2002544228	T2	20021224	JP 2000-617890		20000414
AU 772148	B2	20040408	AU 2000-44602		20000414
NZ 515364	A	20040528	NZ 2000-515364		20000414
ZA 2001009377	A	20021107	ZA 2001-9377		20011107
PRIORITY APPLN. INFO.:			US 1999-312168	A	19990514
			WO 2000-US10062	W	20000414

AB A method is disclosed for treating a disease state in mammals caused by mammalian nasal and sinus cells involved in the inflammatory response. Mammalian nasal and sinus cells participating in the inflammatory response are contacted with an inflammatory response mediator which reduces the undesired inflammatory response and is an antioxidant. The inflammatory response mediator may further provide a cellular energy source and be a building block in the cellular synthesis of other cellular components. The inflammatory mediator is e.g. pyruvate or a pyruvate precursor. Compns. for reducing and treating undesired inflammatory response are also disclosed.

IC ICM A61K031-19
ICS A61K031-415

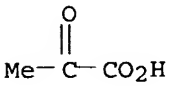
CC 1-7 (Pharmacology)
Section cross-reference(s): 63

IT Antibacterial agents
Antihistamines
Antiviral agents
Fungicides
(pyruvate or other antioxidant inflammatory response mediator for treating mammalian nasal and sinus disease caused by inflammatory response, and use with other agents)

IT 57-55-6, Propylene glycol, biological studies 96-26-4, Dihydroxyacetone **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, salts and precursors 631-66-3, Pyruvamide 2392-63-4 **2922-61-4**, Lithium pyruvate 3997-91-9 **4151-33-1**, Potassium pyruvate 16947-06-1 **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 90088-56-5 145482-34-4, Manganese pyruvate 152102-61-9 308103-10-8
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvate or other antioxidant inflammatory response mediator for treating mammalian nasal and sinus disease caused by inflammatory response)

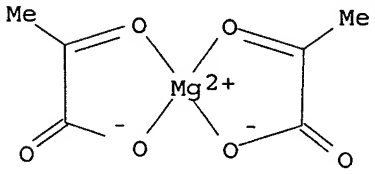
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

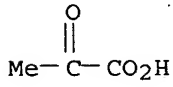


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



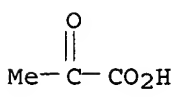
●1/2 Ca

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 47 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:824100 HCAPLUS
DOCUMENT NUMBER: 134:517
TITLE: Method and composition using pyruvate or other antioxidant inflammatory response mediator for treating mammalian nasal and sinus diseases caused by inflammatory response
INVENTOR(S): Katz, Stanley E.; Martin, Alain
PATENT ASSIGNEE(S): Cellular Sciences, Inc., USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

IC ICM A23L001-305
ICS A61K038-17; A61K038-38
INCL 514002000
CC 18-3 (Animal Nutrition)
Section cross-reference(s): 14, 17
ST enteral formulation pyruvate amino acid; **cancer** enteral formulation pyruvate amino acid; **Aids** enteral formulation pyruvate amino acid; fat loss enteral formulation pyruvate amino acid; anabolic fat loss enteral formulation pyruvate amino acid
IT **AIDS** (disease)
Adipose tissue
Anabolic agents
Exercise
Food additives
Neoplasm
(composition including anabolic protein and pyruvate and method]for increasing fat loss in a mammal)
IT 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, L-Cystine, biological studies 60-18-4, L-Tyrosine, biological studies 61-90-5, L-Leucine, biological studies 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies **113-24-6**, Sodium pyruvate 127-17-3D, Pyruvic acid, amide, ester or salt derivs, biological studies 147-85-3, L-Proline, biological studies 631-66-3D, Pyruvamide, derivs 2392-63-4 3997-91-9 **4151-33-1**, Potassium pyruvate 16947-06-1 **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 76391-12-3 90088-56-5 152102-61-9 155404-03-8 252551-47-6 335605-26-0
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(composition including anabolic protein and pyruvate and method]for increasing fat loss in a mammal)
IT **113-24-6**, Sodium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(composition including anabolic protein and pyruvate and method]for increasing fat loss in a mammal)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)

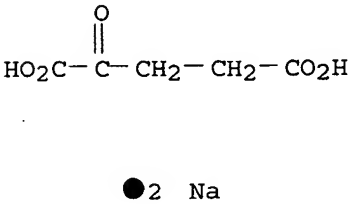


● Na

(Biological study); USES (Uses)
(sodium α-ketoglutarate after x-radiotherapy effect on liver mitochondria respiration and oxidative **phosphorylation**)

IT **305-72-6**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sodium α-ketoglutarate after x-radiotherapy effect on liver mitochondria respiration and oxidative **phosphorylation**)

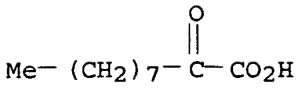
RN 305-72-6 HCAPLUS
CN Pentanedioic acid, 2-oxo-, disodium salt (9CI) (CA INDEX NAME)



L102 ANSWER 46 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:294953 HCAPLUS
DOCUMENT NUMBER: 134:325767
TITLE: Composition of pyruvate and anabolic protein and method for increasing fat loss in a mammal
INVENTOR(S): Beale, Paxton K.; Nickey, Donald O.; Williamson, Millard F.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 10 pp., Cont.-in-part of U.S. 5,889,040.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6221836	B1	20010424	US 1998-213968	19981217
US 5716926	A	19980210	US 1996-686819	19960726
US 5889040	A	19990330	US 1997-951547	19971016
PRIORITY APPLN. INFO.:			US 1996-686819 A1	19960726
			US 1997-951547 A2	19971016

AB The present invention is based in part upon the discovery that the use of pyruvate in enteral formulations, in combination with an anabolic protein composition, produces a synergistic effect in increasing the lean body mass or muscle tissue of a mammal consuming same. The present invention also provides a method for increasing fat loss or decreasing the percent body fat in a mammal through the administration of an anabolic protein composition The present invention relates generally to a composition for enhancing the protein concentration or muscle mass of a mammal and a method for enhancing the protein concentration or muscle mass in a mammal. More specifically, the present invention relates to a composition which comprises an anabolic protein composition and optionally pyruvate and/or derivs. thereof. The compns. according to the invention can take the form of powders, liqs., pills, capsules, tablets, food additives, candies or confections.



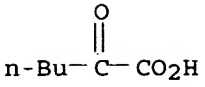
●1/2 Ca

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 45 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:453548 HCAPLUS
DOCUMENT NUMBER: 135:57913
TITLE: Effect of sodium α-ketoglutarate injected after x-ray treatment on the respiration and oxidative **phosphorylation** of liver mitochondria
AUTHOR(S): Kurgalyuk, N. M.; Gorin, O. V.
CORPORATE SOURCE: L'viv. Univ. im. Ivana Franka, Minist. Osviti Ukraini, Lvov, Ukraine
SOURCE: Fiziologichnii Zhurnal (Kiev, Ukraine) (2000), 46(5), 63-70
CODEN: FIZHFQ
PUBLISHER: Institut Fiziologii im. O. O. Bogomol'tsya NAN Ukrainy
DOCUMENT TYPE: Journal
LANGUAGE: Ukrainian

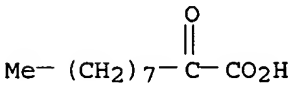
AB It found that total X-ray treatment (everyday expose to 1 R up to achievement of total doses 10, 20 30 R) inhibits the rate of ADP-stimulated respiration of rat liver mitochondria, decreases its efficiency and makes **phosphorylation** less coupled to respiration. All this effects are present from the first period after treatment until the end of treatment. I.p. α-ketoglutarate injections during treatment decreases the inhibition of respiration and oxidative **phosphorylation** and increases the efficiency of respiration.

CC 8-9 (Radiation Biochemistry)
ST sodium ketoglutarate x radiotherapy liver mitochondria respiration **phosphorylation**
IT Respiration, animal
(mitochondrial; sodium α-ketoglutarate after x-radiotherapy effect on liver mitochondria respiration and oxidative **phosphorylation**)
IT Mitochondria
(respiration; sodium α-ketoglutarate after x-radiotherapy effect on liver mitochondria respiration and oxidative **phosphorylation**)
IT Liver
Mitochondria
Oxidative **phosphorylation**, biological
Radioprotectants
(sodium α-ketoglutarate after x-radiotherapy effect on liver mitochondria respiration and oxidative **phosphorylation**)
IT Radiotherapy
(x-ray; sodium α-ketoglutarate after x-radiotherapy effect on liver mitochondria respiration and oxidative **phosphorylation**)
IT **305-72-6**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL



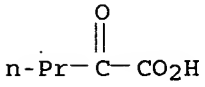
● K

RN 372169-32-9 HCAPLUS
CN Decanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



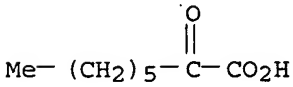
● K

RN 372169-33-0 HCAPLUS
CN Pentanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



● 1/2 Ca

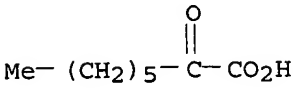
RN 372169-34-1 HCAPLUS
CN Octanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



● 1/2 Ca

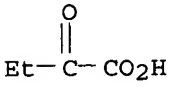
RN 372169-35-2 HCAPLUS
CN Decanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

RN 13022-86-1 HCAPLUS
CN Octanoic acid, 2-oxo-, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



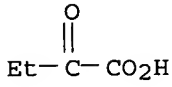
● Na

RN 13287-96-2 HCAPLUS
CN Butanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



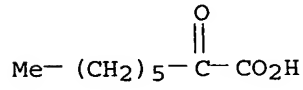
● K

RN 13457-97-1 HCAPLUS
CN Butanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

RN 28870-08-8 HCAPLUS
CN Octanoic acid, 2-oxo-, potassium salt (8CI, 9CI) (CA INDEX NAME)



● K

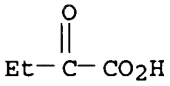
RN 372169-31-8 HCAPLUS
CN Hexanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

(propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

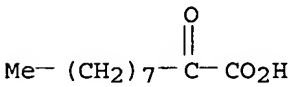
IT 52-90-4, L-Cysteine, reactions 56-87-1, L-Lysine, reactions 70-18-8, Glutathione, reactions 74-79-3, L-Arginine, reactions 79-03-8, Propionic acid chloride 79-09-4, Propionic acid, reactions 107-92-6, Butyric acid, reactions 108-01-0, Dimethylaminoethanol 141-43-5, 2-Aminoethanol, reactions 141-75-3, Butyric acid chloride 156-57-0, Cysteamine hydrochloride 600-18-0, 2-Oxobutyric acid 7347-25-3, Taurine sodium salt
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT **2013-26-5 13022-84-9 13022-85-0 13022-86-1 13287-96-2 13457-97-1 28870-08-8 372169-31-8 372169-32-9 372169-33-0 372169-34-1 372169-35-2**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

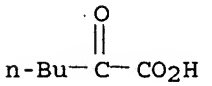
RN 2013-26-5 HCAPLUS
CN Butanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 13022-84-9 HCAPLUS
CN Decanoic acid, 2-oxo-, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 13022-85-0 HCAPLUS
CN Hexanoic acid, 2-oxo-, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



and preparation thereof, for **cancer** treatment)

IT Fatty acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(zinc salts; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT 18266-55-2P 23363-91-9P 29868-00-6P 50409-80-8P, S-Propionylglutathione 52513-95-8P 56409-18-8P 75383-79-8P 90434-46-1P 91725-14-3P 104071-94-5P 160112-39-0P 160200-97-5P 168278-67-9P 372169-26-1P 372169-27-2P 372169-28-3P 372169-29-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT 79-09-4D, Propionic acid, salts and derivs. 107-92-6D, Butyric acid, salts and derivs. 108-01-0D, Dimethylaminoethanol, salts with saturated fatty acids 124-07-2D, Caprylic acid, derivs. 137-40-6 141-43-5D, 2-Aminoethanol, salts with saturated fatty acids 142-62-1D, Caproic acid, derivs. 156-54-7 327-62-8 334-48-5D, Capric acid, salts and derivs. 556-45-6 557-09-5 557-27-7 557-28-8 566-27-8, 7β-Hydroxycholesterol 589-39-9 764-71-6 1002-62-6 1984-06-1 **2013-26-5** 3386-57-0 4075-81-4 5743-36-2 6107-56-8 7112-02-9 7726-06-9 7726-08-1 10051-44-2 **13022-84-9** **13022-85-0** **13022-86-1** 13040-17-0 13040-18-1 13282-37-6 **13287-96-2** **13457-97-1** 13747-30-3 16268-48-7 16268-49-8 19455-00-6 20779-08-2 23409-25-8 25859-29-4 28098-03-5 **28870-08-8** 31301-00-5 31301-05-0 31301-06-1 38708-95-1 42966-30-3 53833-11-7 68945-90-4 75478-96-5 105449-93-2 108067-35-2 127633-40-3 136468-14-9 372169-30-7 **372169-31-8** **372169-32-9** **372169-33-0** **372169-34-1** **372169-35-2** 372169-36-3 372169-37-4 372169-38-5 372169-39-6 372169-40-9 372169-41-0 372169-42-1 372169-43-2 372169-44-3 372169-45-4 372169-47-6 372169-48-7 372169-49-8 372169-51-2 372169-53-4 372169-54-5 372169-55-6 372169-56-7 372169-57-8 372169-58-9 372169-59-0 372169-60-3 372169-61-4 372169-62-5 372169-63-6 372169-64-7 372169-65-8 372169-66-9 372169-67-0 372169-68-1 372169-69-2 372169-70-5 372169-71-6 372169-72-7 372169-73-8 372169-74-9 372169-75-0 372169-76-1 372169-77-2 372169-78-3 372169-79-4 372169-80-7 372169-81-8 372169-82-9 372169-83-0 372169-84-1 372169-85-2 372169-86-3 372169-87-4 372169-88-5 372169-89-6 372169-90-9 372169-91-0 372169-92-1 372169-93-2 372169-95-4 372169-97-6 372169-99-8 372170-01-9 372170-02-0 372170-03-1 372170-04-2 372170-05-3 372170-06-4 372170-07-5 372170-08-6 372170-09-7 372170-10-0 372170-11-1 372170-12-2 372170-13-3 372170-14-4 372170-15-5 372170-16-6 372170-17-7 372170-18-8 372170-19-9 372170-20-2 372170-21-3 372170-22-4 372170-23-5 372170-24-6 372170-25-7 372170-26-8 372170-27-9 372170-28-0 372170-29-1 372178-66-0 372178-67-1 372178-68-2 372178-69-3 372178-70-6 372178-71-7 372178-72-8 372178-73-9
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT 72-89-9, Acetyl coenzyme A
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(capsules; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Amides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fatty; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Drug delivery systems
(injections; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Drug delivery systems
(oral; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Fatty acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(potassium salts; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Antitumor agents
Mitochondria
(propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Amino acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Peptides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reaction products; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

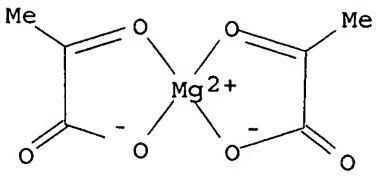
IT Fatty acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(salts, magnesium salts; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Amino acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(salts; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

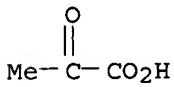
IT Fatty acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(saturated; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Fatty acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sodium salts; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)

IT Drug delivery systems
(tablets; propionic and butyric acid derivs. and amino acid derivs.,



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 44 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:813989 HCAPLUS
DOCUMENT NUMBER: 135:352770
TITLE: Antitumor activity and induction of apoptosis with water-soluble derivatives of propionic and butyric acids
INVENTOR(S): Klemke, Rudolf Erich
PATENT ASSIGNEE(S): Germany
SOURCE: Ger. Offen., 30 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10018098	A1	20011108	DE 2000-10018098	20000412
PRIORITY APPLN. INFO.:			DE 2000-10018098	20000412

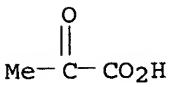
AB The invention discloses the use of amino acid derivs. and/or saturated fatty acid derivs. for the nontoxic treatment of the cancer phenotype by inhibition of acetyl-CoA formation in the mitochondria of cancer cells. Preparation of e.g. salts of propionic and butyric acids (e.g. propionic acid ethanolamine salt) is included.

IC ICM A61K038-06
ICS A61K031-223; A61K031-19
CC 1-6 (Pharmacology)
Section cross-reference(s): 23, 34
ST propionate butyrate deriv prepn antitumor apoptosis; amino acid deriv prepn **cancer** treatment
IT Fatty acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(calcium salts; propionic and butyric acid derivs. and amino acid derivs., and preparation thereof, for **cancer** treatment)
IT Drug delivery systems

pyruvate 152102-61-9 308103-10-8
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method and composition for treating mammalian nasal and sinus diseases caused by inflammatory response)

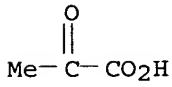
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method and composition for treating mammalian nasal and sinus diseases caused by inflammatory response)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



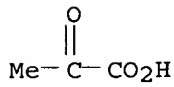
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 43 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:51986 HCAPLUS
DOCUMENT NUMBER: 136:96046
TITLE: Method and composition for treating mammalian nasal and sinus diseases caused by inflammatory response
INVENTOR(S): Katz, Stanley E.; Martin, Alain
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U. S. Ser. No. 348,698.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2002006961	A1	20020117	US 2001-846722		20010501
US 6482856	B1	20021119	US 1999-348698		19990707
PRIORITY APPLN. INFO.:			US 1999-312168	B2	19990514
			US 1999-348698	A2	19990707
			US 1995-3962P	P	19950919
			US 1996-709043	A3	19960906
			US 1998-40679	A1	19980318

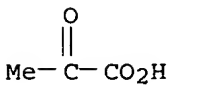
AB A method for treating the disease state in mammals caused by mammalian nasal and sinus cells involved in the inflammatory response is disclosed. Mammalian nasal and sinus cells participating in the inflammatory response are contacted with an inflammatory response mediator which reduces the undesired inflammatory response and is an antioxidant. The inflammatory response mediator may further provide a cellular energy source and be a building block in the cellular synthesis of other cellular components. Compns. for reducing and treating undesired inflammatory response are also disclosed.

IC ICM A61K031-19
ICS A61K031-16
INCL 514625000
CC 1-7 (Pharmacology)
IT Antibacterial agents
Antihistamines
Antioxidants
Antiviral agents
Buffers
Eosinophilia
Erythema
Fungicides
Human
(method and composition for treating mammalian nasal and sinus diseases caused by inflammatory response)
IT 51-45-6, Histamine, biological studies 57-55-6, Propyleneglycol, biological studies 96-26-4, Dihydroxyacetone **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 631-66-3, Pyruvamide 1491-59-4, Oxymetazoline 2392-63-4 **2922-61-4**, Lithium pyruvate 3997-91-9 **4151-33-1**, Potassium pyruvate 9004-10-8, Insulin, biological studies 16947-06-1 **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 90088-56-5 145482-34-4, Manganese

α-Carotene 499-12-7, Aconitic acid 499-75-2, Carvacrol 501-52-0, Hydrocinnamic acid 503-74-2, Iso-Valeric acid 507-70-0, Borneol 513-86-0, Acetoin 514-78-3, Canthaxanthine 515-69-5, α-Bisabolol 526-83-0, Tartaric acid 536-60-7, Cuminylalcohol 541-15-1, L-Carnitine 621-82-9, Cinnamic acid, biological studies 871-22-7, Acetaldehyde dibutyl acetal 1260-17-9, Carminic acid 1335-39-3, Hexenal 1390-65-4, Carmine 1393-63-1, Annatto 1398-61-4, Chitin 1708-35-6 2111-75-3, Perillaaldehyde 2216-51-5 2568-25-4, Benzaldehyde propylene glycolacetal 5392-40-5, Citral 5660-60-6 6812-78-8, Rhodinol 6915-15-7, Malic acid 7212-44-4, Nerolidol 7235-40-7, β-Carotene 7439-89-6, Iron, biological studies 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7439-98-7, Molybdenum, biological studies 7440-09-7, Potassium, biological studies 7440-21-3, Silicon, biological studies 7440-31-5, Tin, biological studies 7440-47-3, Chromium, biological studies 7440-50-8, Copper, biological studies 7440-70-2, Calcium, biological studies 7447-41-8, Lithiumchloride, biological studies 7487-88-9, Magnesium-sulfate, biological studies 7493-57-4, Acetaldehyde phenethylpropyl acetal 7553-56-2, Iodine, biological studies 7558-79-4, Disodium hydrogen phosphate 7616-22-0, γ-Tocopherol 7631-86-9, Silica, biological studies 7647-14-5, Sodium chloride, biological studies 7758-11-4 7778-77-0, Potassium dihydrogen phosphate 7779-41-1, Decanaldimethyl acetal 7782-49-2, Selenium, biological studies 7782-50-5, Chlorine, biological studies 8000-41-7, Terpineol 8007-35-0, Terpinylacetate 9000-69-5, Pectin 9000-92-4, Amylase 9001-33-6, Ficin 9001-62-1, Lipase 9001-73-4, Papain 9001-75-6, Pepsin 9001-92-7, Protease 9001-98-3, Chymosin 9002-07-7, Trypsin 9003-99-0, Peroxidase 9004-07-3, Chymotrypsin 9004-08-4, Cathepsin 9005-32-7, Alginic acid 9005-53-2, Lignin, biological studies 9013-05-2, Phosphatase 9013-19-8, Isomerase 9013-79-0, Esterase 9015-85-4, DNA-Ligase 9027-41-2, Hydrolase 9031-55-4, Carboxylase 9031-56-5, Ligase 9032-92-2, Glycosidase 9035-73-8, Oxidase 9035-82-9, Dehydrogenase 9037-29-0, Oxygenase 9047-61-4, Transferase 9055-04-3, Lyase 9055-15-6, Oxidoreductase 10032-05-0, Heptanaldimethyl acetal 10043-52-4, Calcium chloride, biological studies 10124-49-9, Iron sulfate 15431-40-0, Magnesium ascorbate 25917-35-5, Hexanol 26628-22-8, Sodium azide 33735-91-0, Guanine hydrochloride 36653-82-4, 1-Hexadecanol 37259-52-2, DNA-Ligase 50984-52-6, Anisaldehyde 84843-69-6, Tryptose 119129-70-3, Ananain 150977-36-9, Bromelain 159519-79-6, Brenzcatechin 183256-98-6, Fornesol 186209-48-3, Nonadienol
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**;
BIOL (Biological study); USES (Uses)
(symbiotic regenerative compns. containing microorganisms)

IT **113-24-6**, Sodium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**;
BIOL (Biological study); USES (Uses)
(symbiotic regenerative compns. containing microorganisms)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



Na

Wheat bran
Whey
Yeast
Zingiber officinale
(symbiotic regenerative compns. containing microorganisms)

IT 50-14-6, Calciferol 50-21-5, Lactic acid, biological studies 50-81-7, L-Ascorbic acid, biological studies 52-90-4, L-Cysteine, biological studies 56-81-5, Glycerin, biological studies 56-87-1, L-Lysine, biological studies 57-11-4D, Stearic acid, derivs. 57-13-6, Urea, biological studies 57-55-6, Propyleneglycol, biological studies 57-83-0, Progesterone, biological studies 57-88-5, Cholesterol, biological studies 58-22-0, Testosterone 59-02-9, α-Tocopherol 59-43-8, Thiamin, biological studies 59-67-6, Nicotinic acid, biological studies 62-54-4, Calciumacetate 64-17-5, Ethylalcohol, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 66-25-1, Hexylaldehyde 67-63-0, Isopropanol, biological studies 69-65-8, Mannite 70-47-3, L-Asparagine, biological studies 71-23-8, Propylalcohol, biological studies 71-36-3, n-Butylalcohol, biological studies 71-41-0, n-Amyl alcohol, biological studies 75-07-0, Acetaldehyde, biological studies 76-22-2, Camphor 77-92-9, Citric acid, biological studies 78-70-6, Linalool 78-83-1, Iso Butylalcohol, biological studies 78-84-2 79-83-4, Pantothenic acid 83-79-4, Rotenone 83-88-5, Riboflavin, biological studies 87-44-5, β-Caryophyllen 87-66-1, Pyrogallol 87-89-8, Inositol 89-83-8, Thymol 90-64-2, Mandelic acid 93-15-2, Methyleugenol 93-28-7, Eugenolacetate 94-59-7, Safrol 94-86-0, Propenylguaethol 97-53-0, Eugenol 97-54-1, Isoeugenol 98-01-1, Furfural, biological studies 98-85-1, α-Methylbenzylalcohol 100-51-6, Benzylalcohol, biological studies 100-52-7, Benzaldehyde, biological studies 100-66-3, Anisol, biological studies 102-16-9, Benzylphenylacetate 102-76-1, Triacetine 103-09-3, Octylacetate 103-45-7 103-54-8, Cinnamylacetate 103-82-2, Phenylacetic acid, biological studies 104-46-1, Anethol 104-53-0, Hydrocinnamic aldehyde 104-54-1, Cinnamic alcohol 104-55-2, Cinnamic aldehyde 105-13-5, Anise alcohol 105-82-8, Acetaldehyde dipropylacetal 105-87-3, Geranylacetate 106-22-9, Citronellol 106-23-0, Citronellal 106-24-1, Geraniol 108-46-3, Resorcin, biological studies 108-73-6, Phloroglucin 108-95-2, Phenol, biological studies 109-52-4, Valeric acid, biological studies 110-17-8, Fumaric acid, biological studies 110-82-7, Cyclohexane, biological studies 111-02-4, Squalene 111-70-6, Heptylalcohol 111-71-7, Heptylaldehyde 111-87-5, Octylalcohol, biological studies 112-05-0, Pelargonic acid 112-30-1, n-Decylalcohol 112-31-2, Decanal 112-43-6, 10-Undecen-1-ol 112-53-8, Laurylalcohol 112-54-9, Laurylaldehyde **113-24-6**, Sodium pyruvate 115-95-7, Linalylacetate 120-57-0, Heliotropin 121-32-4, Ethylvanillin 121-33-5, Vanillin 122-03-2, Cuminaldehyde 122-59-8, Phenoxyacetic acid 122-72-5, Hydrocinnamylacetate 122-78-1, Phenylacetaldehyde 122-87-2, Glycin 123-31-9, Hydroquinone, biological studies 123-38-6, Propionaldehyde, biological studies 123-51-3, Iso-Amyl alcohol 123-86-4, n-Butylacetate 123-92-2, Iso-Amylacetate 124-04-9, Hexanedioic acid, biological studies 124-13-0, Octylaldehyde 124-19-6, Nonylaldehyde 125-46-2, Usnic acid 127-08-2, Potassium acetate 127-09-3, Sodium acetate 127-40-2, Lutein 137-08-6, Calciumpantothenate 137-66-6, Ascorbic palmitate 138-86-3, Limonen 140-11-4, Benzylacetate 140-67-0, Methylchavicol 141-78-6, Ethylacetate, biological studies 142-62-1, Capronic acid, biological studies 142-92-7, Hexylacetate 143-08-8, Nonylalcohol 147-85-3, L-Proline, biological studies 148-03-8, β-Tocopherol 149-91-7D, Gallic acid, derivs. 150-84-5, Citronellylacetate 153-18-4, Rutin 154-23-4, Catechin 303-98-0, Coenzyme Q10 321-30-2, Adenine sulfate 331-39-5, Caffeic acid 367-51-1, Sodium thioglycolate 432-70-2,

Oryza sativa
Panax
Passiflora edulis
Paullinia cupana
Pearl
Persea
Peumus boldus
Phocidae
Phosphors
Picea
Pimenta dioica
Pimpinella anisum
Pinus
Placenta
Plantago major
Pollen
Porifera
Poultry
Preservatives
Primula veris
Propolis
Prunus amygdalus
Prunus persica
Quassia
Rheum
Rhodotorula rubra
Rosmarinus officinalis
Royal jelly
Ruscus aculeatus
Saccharomyces cerevisiae
Salvia
Sarcina
Satureja
Scorzonera hispanica
Serratia marcescens
Sesamum indicum
Silk
Simmondsia chinensis
Solanum tuberosum
Solvents
Staphylococcus epidermidis
Streptococcus
Styrax
Symphytum officinale
Syzygium aromaticum
Taraxacum officinale
Taxus
Theobroma cacao
Theobroma grandiflorum
Thymus (plant)
Tilia
Torulopsis
Trifolium
Trigonella foenum-graecum
Tussilago farfara
Urtica
Valeriana
Veillonella parvula
Veratrum viride
Viscaceae

Fur
Gaffkya tetragena
Gentiana
Geotrichum
Ginkgo
Glycine max
Glycyrrhiza
Hair
Hamamelis
Hay
Hedera
Helianthus annuus
Hibiscus
Honey
Human
Humulus
Hypericum
Immunostimulants
Immunosuppressants
Immunotherapy
Ivory
Juglans
Juniperus
Lactobacillus acidophilus
Lactobacillus casei
Lactobacillus delbrueckii bulgaricus
Lactobacillus fermentum
Lamium
Laurus nobilis
Lavandula
Lawsonia inermis
Leather
Liquidambar
Malus pumila
Malva
Mangifera indica
Marigold
Matricaria recutita
Meat
Melissa
Mentha aquatica
Mentha piperita
Menyanthes trifoliata
Milk
Moraxella catarrhalis
Moschus
Mucor
Musa
Myristica
Neisseria flava
Neisseria flavescens
Neisseria perflava
Neisseria sicca
Neisseria subflava
Nut (seed)
Odor and Odorous substances
Orange
Origanum
Origanum vulgare
Orthosiphon

Bacillus subtilis
Beeswax
Bifidobacterium bifidum
Blood
Bone
Borrelia buccalis
Brassica
Calamus (palm genus)
Camellia
Camellia sinensis
Cananga odorata
Carica papaya
Carum carvi
Caviar
Centaurea cyanus
Centaurium
Chelidonium majus
Chrysanthemum
Cinchona
Cinnamon (horticultural common name)
Citrobacter
Citrullus lanatus
Citrus aurantifolia
Citrus aurantium
Citrus limon
Citrus paradisi
Citrus reticulata
Citrus sinensis
Cladosporium
Cocos nucifera
Coffea
Coral
Coriandrum sativum
Corynebacterium pseudodiphtheriticum
Corynebacterium xerosis
Crataegus
Croton eluteria
Crustacea
Cucumis melo
Cucumis sativus
Cupressus
Cymbopogon
Dactylopius coccus
Daucus carota
Derris (genus)
Dietary supplements
Digestive tract
Echinacea
Egg, poultry
Elettaria cardamomum
Emulsifying agents
Equisetum
Eucalyptus
Eucalyptus citriodora
Feather
Feed additives
Fish
Flavor
Foeniculum vulgare
Fungicides

CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

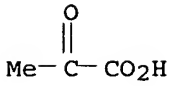
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1228769	A1	20020807	EP 2001-102384	20010202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CA 2437530	AA	20020906	CA 2002-2437530	20020201
WO 2002067986	A2	20020906	WO 2002-EP1056	20020201
WO 2002067986	A3	20031211		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1390071	A2	20040225	EP 2002-712882	20020201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005503332	T2	20050203	JP 2002-567351	20020201
US 2004076614	A1	20040422	US 2003-467040	20031204
PRIORITY APPLN. INFO.:			EP 2001-102384 A	20010202
			WO 2002-EP1056 W	20020201

AB The invention concerns regenerative drugs, dietary supplements, feed additives that contain microorganisms and modulating substances, e.g. enzymes, GRAS (Generally Recognized As Safe) aromas, plant exts. Further the compns. contain vitamins, minerals, growth promoters, carrier substances, etc. Microorganisms are a-pathogenic, pathogenic or facultative pathogenic,.

IC ICM A61K045-06
ICS A61P043-00

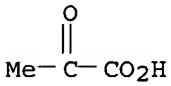
CC 18-6 (Animal Nutrition)
Section cross-reference(s): 1, 17, 63

IT Achillea
Actinidia chinensis
Aesculus
Alcaligenes faecalis
Algae
Allergy inhibitors
Allium cepa
Allium sativum
Aloe (genus)
Althaea officinalis
Anethum graveolens
Animals
Anti-infective agents
Antioxidants
Antitumor agents
Arctium
Arnica
Artemisia dracunculus
Avena sativa



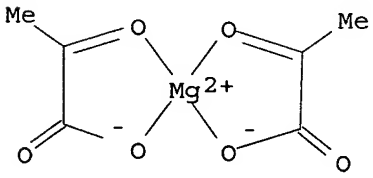
● Na

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

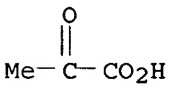


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 42 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:591669 HCAPLUS
DOCUMENT NUMBER: 137:154384
TITLE: Symbiotic regenerative compositions containing microorganisms
INVENTOR(S): Schuer, Joerg-Peter
PATENT ASSIGNEE(S): Germany
SOURCE: Eur. Pat. Appl., 25 pp.

INVENTOR(S): Pistolesi, Elvira
PATENT ASSIGNEE(S): Hunza Di Pistolesi Elvira E C. S.A.S., Italy
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002062329	A1	20020815	WO 2002-EP640	20020123

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: IT 2001-MI204 A 20010202

AB Therapeutic and/or nutritional compns. contain pyruvic acid as such or salified with minerals, basic amino acids, proteins or peptides containing basic amino acids, nitrogen bases, and glutamine (and/or proteins and/or peptides containing it as such or salified). Thus, a composition contained calcium pyruvate 90, glutamine 133, and inulin 777 g.

IC ICM A61K031-195
ICS A61K031-19; A61K031-195; A61K031-19
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 17
IT 56-85-9, Glutamine, biological studies **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, chromium and vanadium complexes **4151-33-1**, Potassium pyruvate 7440-47-3D, Chromium, pyruvic acid complexes 7440-62-2D, Vanadium, pyruvic acid complexes 9000-69-5, Pectin 9004-34-6, Cellulose, biological studies 9005-25-8, Starch, biological studies 9005-80-5, Inulin 9012-76-4, Chitosan 9050-36-6, Maltodextrin **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 446251-91-8 446251-93-0 446251-95-2 446251-97-4 446251-99-6 446252-01-3 446252-04-6 446252-06-8 446252-08-0 446252-10-4 446252-12-6
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic and nutritional compns. containing pyruvic acid and glutamine having antioxidant activity and capable of controlling overweight)
IT **113-24-6**, Sodium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic and nutritional compns. containing pyruvic acid and glutamine having antioxidant activity and capable of controlling overweight)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)

Postirradn. cells recovery results in a decrease of the ED DΦ(t) = DΛK+(1-K)eβt, where D1 - the initial dose; t - the duration of recovery; β - the recovery constant, i.e. the probability of the recovery per time unit; K - the fraction of irreversible component, determined by the equation K = K(∞) = DΦ(∞)/D1. Results: Using the methodol. described in this paper to estimate the quant. parameters of the recovery and exptl. data published by others, it is shown that the fraction of irreversible component increases with the increase in the concentration of chemical inhibitors of recovery while the recovery constant, i.e. the probability of the recovery per time unit, was identical for all treatments studied. Conclusion: The recovery process itself is not damaged after the combined action of ionizing radiation and the studied chemical inhibitors of recovery and the mechanism of their action may be related with the enhanced yield of irreversibly damaged cells.

CC 8-9 (Radiation Biochemistry)

ST modeling combined X radiation radiosensitizer cell damage recovery; **cancer** x radiotherapy radiosensitizer modeling

IT Simulation and Modeling
X-ray
(modeling of combined action of X-ray and radiosensitizers-inhibitors of cell recovery from lethal damage: implication for **cancer** radiotherapy)

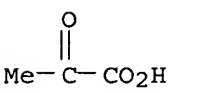
IT Drug interactions
(pharmacodynamic; modeling of combined action of X-ray and radiosensitizers-inhibitors of cell recovery from lethal damage: implication for **cancer** radiotherapy)

IT 72-17-3, Sodium lactate **113-24-6**, Sodium pyruvate 303-81-1, Novobiocin 389-08-2, Nalidixic acid
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(modeling of combined action of X-ray and radiosensitizers-inhibitors of cell recovery from lethal damage: implication for **cancer** radiotherapy)

IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(modeling of combined action of X-ray and radiosensitizers-inhibitors of cell recovery from lethal damage: implication for **cancer** radiotherapy)

RN 113-24-6 HCAPLUS

CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



L102 ANSWER 41 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:615393 HCAPLUS
DOCUMENT NUMBER: 137:174927
TITLE: Therapeutic and nutritional compositions containing pyruvic acid and glutamine, having antioxidizing activity and capable of controlling overweight

EP. Delayed treatment with EP solution instead of RLS ameliorated ileal mucosal hyperpermeability to FD4 and bacterial translocation to mesenteric lymph nodes in mice challenged with lipopolysaccharide (LPS). These data support the view that EP ameliorates cytokine- and/or LPS-induced derangements in intestinal epithelial barrier function.

CC 1-12 (Pharmacology)

ST ethyl pyruvate intestinal epithelium permeability endotoxicshock cytoprotection occludin ZO1; antiinflammatory ethyl pyruvate interferon TNF interleukin iNOS NO NFkappaB; cytoprotectant ethyl pyruvate gut barrier permeability **bacteria** lymphnode hepatotoxicity

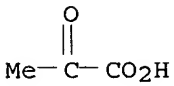
IT Interleukin 1β
Reactive oxygen species
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Et pyruvate ameliorates intestinal epithelial barrier dysfunction in endotoxemic mice and immunostimulated enterocytic cells monolayers)

IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(Et pyruvate ameliorates intestinal epithelial barrier dysfunction in endotoxemic mice and immunostimulated enterocytic cells monolayers)

IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(Et pyruvate ameliorates intestinal epithelial barrier dysfunction in endotoxemic mice and immunostimulated enterocytic cells monolayers)

RN 113-24-6 HCAPLUS

CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 40 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:839915 HCAPLUS

DOCUMENT NUMBER: 138:364828

TITLE: The influence of combined action of X-rays and chemicals on Chinese hamster cell recovery

AUTHOR(S): Komarova, L. N.; Petin, V. G.; Tkhabisimova, M. D.

CORPORATE SOURCE: Medical Radiological Res. Center, RAMS, Obninsk, Russia

SOURCE: Meditsinskaya Radiologiya i Radiatsionnaya Bezopasnost (2002), 47(4), 17-22
CODEN: MRRBE5; ISSN: 1024-6177

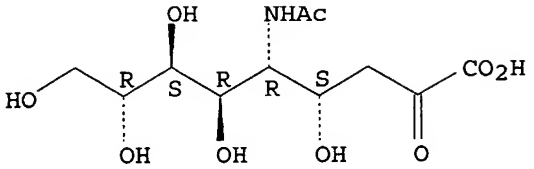
PUBLISHER: RADEKON

DOCUMENT TYPE: Journal

LANGUAGE: Russian

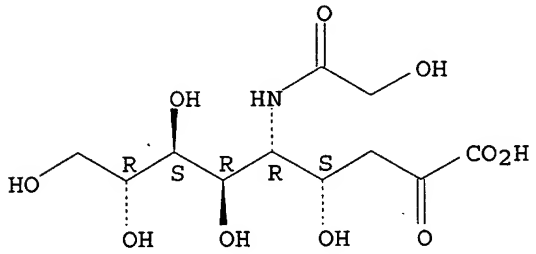
AB Purpose: To estimate quant. parameters describing the postradiation recovery of Chinese hamster cells (V79A) exposed to X-rays and the subsequent 24 h treatment by recovery inhibitors - sodium pyruvate, sodium lactate, nalidixic acid and novobiocin in various concns. Math. methods:

Absolute stereochemistry.



RN 1113-83-3 HCAPLUS
CN Neuraminic acid, N-(hydroxyacetyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L102 ANSWER 39 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:12052 HCAPLUS
DOCUMENT NUMBER: 138:396147
TITLE: Ethyl pyruvate ameliorates intestinal epithelial barrier dysfunction in endotoxemic mice and immunostimulated Caco-2 enterocytic monolayers
AUTHOR(S): Sappington, Penny L.; Han, Xiaonan; Yang, Runkuan; Delude, Russell L.; Fink, Mitchell P.
CORPORATE SOURCE: Department of Critical Care Medicine, University of Pittsburgh Medical School, Pittsburgh, PA, USA
SOURCE: Journal of Pharmacology and Experimental Therapeutics (2003), 304(1), 464-476
CODEN: JPETAB; ISSN: 0022-3565
PUBLISHER: American Society for Pharmacology and Experimental Therapeutics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Et pyruvate (EP) solution ameliorates ileal mucosal hyperpermeability and decreases the expression of several proinflammatory genes in ileal and/or colonic mucosa when it is used instead of Ringer's lactate solution (RLS) to resuscitate mice from hemorrhagic shock. To test the hypothesis that EP can ameliorate gut barrier dysfunction induced by other forms of inflammation, we incubated Caco-2 monolayers for 24 to 48 h with cytomix (a mixture of interferon-γ, tumor necrosis factor-α, and interleukin-1β) in the presence or absence of graded concns. of EP or sodium pyruvate. Cytomix increased the permeability of Caco-2 monolayers to fluorescein isothiocyanate-labeled dextran (FD4; average mol. mass 4 kDa), but this effect was inhibited by adding 0.1 to 10 mM EP (but not similar concns. of sodium pyruvate) to the culture medium. EP inhibited several other cytomix-induced phenomena, including nuclear factor-κB activation, inducible nitric oxide synthase mRNA expression, and nitric oxide production Cytomix altered the expression and localization of the tight junctional proteins, ZO-1 and occludin, but this effect was prevented by

US 2001-340182P	P	20011214
US 2002-360909P	P	20020228
US 2002-172809	A1	20020613
WO 2002-EP7124	A	20020627
WO 2002-EP7128	W	20020627
US 2004-779158	A3	20040213

OTHER SOURCE(S): MARPAT 138:66712

AB The invention provides compds. ABCDE [A = any amino acid except D-amino acid; B= Pro, Ala, Ser, Gly, Hyp, acetidine-(2)-carboxylic acid, pipecolic acid; C = any amino acid except Pro, Hyp, acetidine-(2)-carboxylic acid, pipecolic acid, N-alkylated amino acid; D, E = any amino acid or absent] and pharmaceutically acceptable **salts** thereof. The compds. can be used for the preparation of a medicament for the prophylaxis or treatment of a condition mediated by modulation of dipeptidyl peptidase IV activity, wherein the condition preferably is selected from impaired glucose tolerance, diabetes mellitus, glucosuria and metabolic acidosis.

IC ICM C07K005-08
ICS C07K005-00; C07K007-06; A61K038-06; A61K038-07; A61K038-08; A61P003-00

CC 1-12 (Pharmacology)

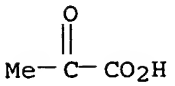
IT ADP ribosylation
Acetylation
Antidiabetic agents
Biotinylation
Carboxylation
Diabetes mellitus
Drug delivery systems
Farnesylation
Formylation
Glycosylation
Hydroxylation
Methylation
Myristoylation
Palmitoylation
Phosphorylation
Sulfation
Tert-butylation
(peptide compds. for competitive modulation of dipeptidyl peptidase IV, and therapeutic use)

IT 54-47-7D, Pyridoxal phosphate, peptide reaction products 70-18-8D, Glutathione, peptide reaction products 98-79-3D, Pyroglutamic acid, peptide reaction products **131-48-6D**, N-Acetylneuraminic acid, peptide reaction products 672-15-1D, Homoserine, peptide reaction products **1113-83-3D**, N-Glycolylneuraminic acid, peptide reaction products 2226-71-3D, 4'-Phosphopantetheine, peptide reaction products 6066-82-6D, N-Hydroxysuccinimide, peptide reaction products 57828-26-9D, Lipoic acid, peptide reaction products
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(peptide compds. for competitive modulation of dipeptidyl peptidase IV, and therapeutic use)

IT **131-48-6D**, N-Acetylneuraminic acid, peptide reaction products
1113-83-3D, N-Glycolylneuraminic acid, peptide reaction products
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(peptide compds. for competitive modulation of dipeptidyl peptidase IV, and therapeutic use)

RN 131-48-6 HCAPLUS

CN Neuraminic acid, N-acetyl- (9CI) (CA INDEX NAME)

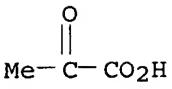


●1/2 Ca

L102 ANSWER 38 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:22901 HCAPLUS
DOCUMENT NUMBER: 138:66712
TITLE: Peptide structures useful for competitive modulation of dipeptidyl peptidase IV catalysis, and therapeutic use
INVENTOR(S): Demuth, Hans Ulrich; Hoffmann, Torsten; Manhart, Susanne; Hoffmann, Matthias; Heins, Jochen
PATENT ASSIGNEE(S): Probiodrug AG, Germany
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

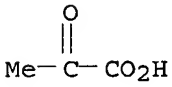
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003002593	A2	20030109	WO 2002-EP7128	20020627
WO 2003002593	A3	20030904		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003119750	A1	20030626	US 2002-126374	20020419
US 2003130199	A1	20030710	US 2002-172809	20020613
CA 2419888	AA	20030109	CA 2002-2419888	20020627
US 2003135023	A1	20030717	US 2002-186177	20020627
ZA 2003000833	A	20040210	ZA 2003-833	20020627
EP 1399469	A2	20040324	EP 2002-762308	20020627
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
ZA 2003001312	A	20040330	ZA 2003-1312	20020627
JP 2004530729	T2	20041007	JP 2003-508973	20020627
ZA 2003000595	A	20040213	ZA 2003-595	20030122
NO 2003000900	A	20030424	NO 2003-900	20030226
US 2005171025	A1	20050804	US 2005-93991	20050330
US 2006194852	A1	20060831	US 2006-369606	20060307

PRIORITY APPLN. INFO.:		
EP 2001-114796	A	20010627
US 2001-301158P	P	20010627
DE 2001-10150203	A	20011012
DE 2001-10154689	A	20011109
US 2001-340151P	P	20011214



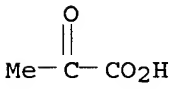
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



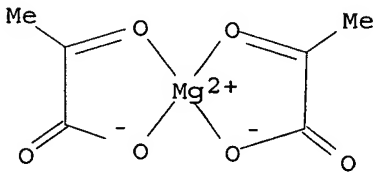
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



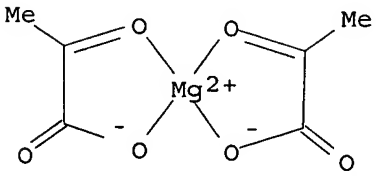
RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

PRIORITY APPLN. INFO.: US 2001-933981 A 20010821
WO 2002-US26059 W 20020815

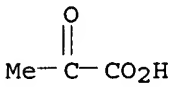
AB The invention provides a method for treating bronchial constriction in mammals. The method comprises contacting mammalian lung with a compound selected from the group consisting of pyruvate and pyruvate precursors. The compound is present in a therapeutically effective amount to produce bronchial dilation. The invention also provides a method for treating airway disease in mammals. The method comprises contacting mammalian lung with a compound selected from the group consisting of pyruvate and pyruvate precursors. The compound is present in an amount of about 0.0001-0.005 mmol. The invention further provides a method for treating airway disease in mammals. The method comprises contacting the mammalian lung with a compound selected from the group consisting of pyruvate and pyruvate precursors. The compound is present in a therapeutically effective amount to prevent bronchial spasm. The invention is still further directed to a method for treating airway disease in mammals. The method comprises contacting the mammalian lung with a compound selected from the group consisting of pyruvate and pyruvate precursors. The compound is present in a therapeutically effective amount to prevent bronchial constriction.

IC ICM A61K009-14
INCL 424046000
CC 1-9 (Pharmacology)
IT Antiasthmatics
Asthma
Bronchodilators
Respiratory system, disease
(pyruvate or pyruvate precursor for treating bronchial constriction and airway diseases)
IT Antibacterial agents
Antihistamines
Antiviral agents
Drugs
Fungicides
Leukotriene antagonists
(pyruvate or pyruvate precursor for treating bronchial constriction and airway diseases, and use with other agents)
IT **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, derivs. and salts 631-66-3, Pyruvamide 2392-63-4 **2922-61-4**, Lithium pyruvate 3997-91-9 **4151-33-1**, Potassium pyruvate 16947-06-1 **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 90088-56-5 145482-34-4, Manganese pyruvate 152102-61-9 499114-09-9
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvate or pyruvate precursor for treating bronchial constriction and airway diseases)
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvate or pyruvate precursor for treating bronchial constriction and airway diseases)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 37 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:154908 HCAPLUS
DOCUMENT NUMBER: 138:180726
TITLE: Method using pyruvate or a pyruvate precursor for treating bronchial constriction and bronchospasm
INVENTOR(S): Katz, Stanley E.
PATENT ASSIGNEE(S): Cellular Sciences, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

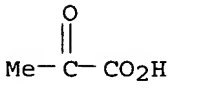
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003039615	A1	20030227	US 2001-933981	20010821
US 6623723	B2	20030923		
CA 2457955	AA	20030306	CA 2002-2457955	20020815
WO 2003017929	A2	20030306	WO 2002-US26059	20020815
WO 2003017929	A3	20030508		
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IN, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1429712	A2	20040623	EP 2002-757156	20020815
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005500396	T2	20050106	JP 2003-522452	20020815

(**viral**; method for treating pulmonary disease states in mammals by altering indigenous in vivo levels of nitric oxide)

IT **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 156-06-9 298-12-4 328-42-7, Oxaloacetic acid 328-50-7 600-18-0 631-66-3, Pyruvamide 759-05-7 816-66-0 2392-63-4 2464-23-5 2492-75-3 **2922-61-4**, Lithium pyruvate 3184-35-8 3997-91-9 **4151-33-1**, Potassium pyruvate 16947-06-1 **18983-79-4**, Magnesium pyruvate 24809-08-3 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 90088-56-5 145482-34-4, Manganese pyruvate 152102-61-9
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method for treating pulmonary disease states in mammals by altering indigenous in vivo levels of nitric oxide)

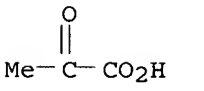
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method for treating pulmonary disease states in mammals by altering indigenous in vivo levels of nitric oxide)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



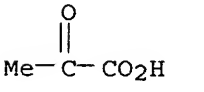
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

ACCESSION NUMBER: 2003:155097 HCAPLUS
DOCUMENT NUMBER: 138:198634
TITLE: Method for treating pulmonary disease states in mammals by altering indigenous in vivo levels of nitric oxide
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Cellular Sciences, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003040542	A1	20030227	US 2002-205353	20020725
US 6689810	B2	20040210		
CA 2457983	AA	20030306	CA 2002-2457983	20020815
EP 1427402	A1	20040616	EP 2002-766007	20020815
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005501106	T2	20050113	JP 2003-522516	20020815
US 2004220265	A1	20041104	US 2003-747963	20031230
PRIORITY APPLN. INFO.:			US 2001-313872P	P 20010821
			US 2002-205353	A2 20020725
			WO 2002-US26060	W 20020815

AB The present invention pertains to a method for treating a pulmonary disease state in mammals by altering indigenous in vivo levels of nitric oxide in mammalian cells. The method comprises contacting the mammalian cells with a therapeutically effective amount of a nitric oxide mediator selected from the group consisting of pyruvates, pyruvate precursors, α-keto acids having four or more carbon atoms, precursors of α-keto acids having four or more carbon atoms, and the salts thereof. The method may further comprise contacting the mammalian cells with a therapeutic agent and a nitric oxide source selected from the group consisting of nitric oxide, nitric oxide precursors, and nitric oxide stimulators.

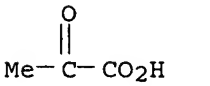
IC ICM A61K031-195
ICS A61K031-19; A61K031-198
INCL 514557000; 514561000
CC 1-9 (Pharmacology)
IT Infection
(**bacterial**; method for treating pulmonary disease states in mammals by altering indigenous in vivo levels of nitric oxide)
IT Antiasthmatics
Antibacterial agents
Antihistamines
Antitumor agents
Antiviral agents
Asthma
Cystic fibrosis
Emphysema
Fungicides
Mycosis
Neoplasm
Pneumonia
(method for treating pulmonary disease states in mammals by altering indigenous in vivo levels of nitric oxide)
IT Infection

Mineral elements, biological studies
Monosaccharides
Nucleosides, biological studies
Peptides, biological studies
Peptones
Platelet-derived growth factors
Prostaglandins
Proteoglycans, biological studies
Salts, biological studies
Tenascins
Trace metals
Transferrins
Vitamins
Vitronectin
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. containing growth factors, nutrients, and extracellular matrix proteins for skin rejuvenation and repair)

IT 50-81-7, L-Ascorbic acid, biological studies 50-99-7, D-Glucose, biological studies 60-33-3, Linoleic acid, biological studies 67-48-1, Choline chloride 67-63-0, Isopropanol, biological studies 68-19-9, Vitamin B12 68-94-0, Hypoxanthine 70-18-8, L-Glutathione, biological studies 87-89-8, Inositol 112-80-1, Oleic acid, biological studies **113-24-6**, Sodium pyruvate 134-03-2, Sodium ascorbate 3416-24-8, Glucosamine 7447-40-7, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies 7647-14-5, Sodium chloride, biological studies 7720-78-7, Ferrous sulfate 7733-02-0, Zinc sulfate 7758-98-7, Cupric sulfate, biological studies 9002-72-6, Growth hormone 9004-10-8, Insulin, biological studies 9004-61-9, Hyaluronic acid 10043-52-4, Calcium chloride, biological studies 10421-48-4, Ferric nitrate 11096-26-7, Erythropoietin 11138-66-2, Xanthan gum 61912-98-9, Insulin-like growth factor 62031-54-3, Fibroblast growth factor 62229-50-9, Epidermal growth factor 83869-56-1, Granulocyte macrophage colony stimulating factor 127464-60-2, Vascular endothelial growth factor 143011-72-7, Granulocyte colony stimulating factor 148348-15-6, Fibroblast growth factor 7
RL: COS (Cosmetic use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. containing growth factors, nutrients, and extracellular matrix proteins for skin rejuvenation and repair)

IT **113-24-6**, Sodium pyruvate
RL: COS (Cosmetic use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. containing growth factors, nutrients, and extracellular matrix proteins for skin rejuvenation and repair)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



L102 ANSWER 36 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003068297	A1	20030410	US 2002-222949	20020816
US 2004265268	A1	20041230	US 2004-821427	20040409
PRIORITY APPLN. INFO.:			US 2001-313306	A2 20010818
			US 2001-313307	A2 20010818
			US 2001-313313	A2 20010818
			US 2001-313314	A2 20010818
			US 2001-313306P	P 20010818
			US 2001-313307P	P 20010818
			US 2001-313313P	P 20010818
			US 2001-313314P	P 20010818
			US 2002-222949	A2 20020816

AB Compns. for the repair of mammalian skin contain cell growth enhancers to increase the growth rate of skin cells, nutrients to support log phase growth of skin cells, extracellular matrix proteins, stimulators of extracellular matrix proteins, and penetration enhancers. The compns. are effective for repairing and rejuvenating mammalian skin, such that aging skin treated with the compns. has a significant reduction in the number of fine lines and wrinkles. The compns. are also effective for promoting the healing of skin that has suffered a wound, such as a sunburn or abrasion, and for promoting the growth of hair on the scalp. The composition is applied as a coating on a medical or surgical device selected from the group consisting of sutures, implants, homeostatic plugs, dressings, gauze and pads. For example, an ointment with an antimicrobial agent or antibiotics for wound healing was prepared containing D-glucose 2.0-6.0 g/L, amino acids 4.0-150.0 mg/L, vitamins (B12, choline chloride, and inositol) 0.5-15.0 mg/L, sodium bicarbonate buffer 2.0-3.0 g/L, minerals (calcium chloride, magnesium sulfate) 25.0-150.0 mg/L, trace metals (ferric nitrate, ferrous, zinc and cupric sulfates) 0.001-0.6 mg/L, linoleic acid 0.03-0.3 μg/L, proteins (collagens, insulin, transferrin) 0.1-3.0 mg/L, EGF 0.1-10.0 mg/L, fibronectin 5.0-50.0 mg/L, growth factors (TGF-β, VEGF) 0.1-10.0 mg/L, fibrous proteins (elastin, collagen) 0.1-3.0%, Na ascorbate 30-150 μg/L, hyaluronic acid 1.0-20.0 mg/L, glucosamines (heparin, chondroitin sulfate) 0.1-10 mg/L, aggrecan, alc. as penetration enhancer 0-20.0 mg/L, and water to 1 L.

IC ICM A61K038-19
ICS A61K038-18; A61K031-557; A61K031-728; A61K031-715

INCL 424085100; 514012000; 514054000; 514573000

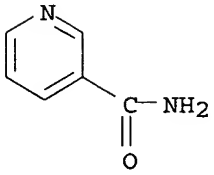
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 62

IT Aggrecans
Amino acids, biological studies
Angiogenic factors
Carbohydrates, biological studies
Collagens, biological studies
Cytokines
Disaccharides
Elastins
Fatty acids, biological studies
Fibronectins
Glycosaminoglycans, biological studies
Growth factors, animal
Hemopoietins
Integrins
Jojoba oil
Laminins
Lipoproteins

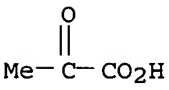
147-85-3, Proline, biological studies 463-40-1, Linolenic acid
541-15-1, L-Carnitine 651-48-9, Dehydroepiandrosterone sulfate
6893-02-3, 3,3'[,5-Triiodo-L-thyronine 7447-40-7, Potassium chloride,
biological studies 7558-80-7, Sodium dihydrogen phosphate 7647-14-5,
Sodium chloride, biological studies 7733-02-0, Zinc sulfate 7786-30-3,
Magnesium chloride, biological studies 9001-05-2, Catalase 9004-10-8,
Insulin, biological studies 9054-89-1, Superoxide dismutase
10043-52-4, Calcium chloride, biological studies 10102-18-8, Sodium
selenite 10191-41-0, DL-α-Tocopherol 10421-48-4, Ferric nitrate
52225-20-4, DLα Tocopherol acetate 106096-93-9, Fgf2
RL: **FFD (Food or feed use)**; PEP (Physical, engineering or
chemical process); PYP (Physical process); **THU (Therapeutic use)**
; BIOL (Biological study); PROC (Process); USES (Uses)
(nutrient medium for maintaining neural cells in injured nervous
system)

IT **98-92-0**, Niacinamide **113-24-6**, Sodium pyruvate
RL: **FFD (Food or feed use)**; PEP (Physical, engineering or
chemical process); PYP (Physical process); **THU (Therapeutic use)**
; BIOL (Biological study); PROC (Process); USES (Uses)
(nutrient medium for maintaining neural cells in injured nervous
system)

RN 98-92-0 HCAPLUS
CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

L102 ANSWER 35 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:281939 HCAPLUS
DOCUMENT NUMBER: 138:309347
TITLE: Composition and methods for skin rejuvenation and repair
INVENTOR(S): Jain, Deepak
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 313,306.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2

WO 2003029417 A2 20030410 WO 2002-US31137 20021001
WO 2003029417 A3 20031204
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003077564 A1 20030424 US 2002-261462 20020930
CA 2462802 AA 20030410 CA 2002-2462802 20021001
EP 1451294 A2 20040901 EP 2002-766430 20021001
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
CN 1599792 A 20050323 CN 2002-823992 20021001
US 2005208028 A1 20050922 US 2005-115479 20050427
PRIORITY APPLN. INFO.: US 2001-326658P P 20011002
US 2002-261462 B1 20020930
WO 2002-US31137 W 20021001

AB A method to improve neural cell viability in brain or spinal cord tissue after brain or spinal cord injury or surgery is provided. This method comprises applying a sterile liquid medium to the brain or spinal cord tissue, wherein the sterile aqueous liquid medium comprises 0 to about 3000 μM CaCI2, about 0.1 to about 1.2μM Fe(NO3)3, about 2500 to about 10000 μM KCI, 0 to about 4000 μM MgCI2, about 30000 to about 150000 μM NaCI, about 100 to about 30000 μM NaHCO3, about 250 to about 4000 μM NaH2PO4, about 0.01 to about 0.4 μM sodium selenite, about 0.2 to about 2 μM ZnSO4, about 2500 to about 50000 μM D-glucose, about 1 to about 50 μM L-carnitine, about 3 to about 80 μM ethanolamine, about 15 to about 400 μM D(+)-galactose, about 40 to about 800 μM putrescine, about 20 to about 500 μM sodium pyruvate, and growth-promoting essential fatty acids, hormones, amino acids, vitamins and anti-oxidants in amts. effective for neuron growth, and wherein the medium is essentially free of ferrous sulfate, glutamate, and aspartate.

IC ICM C12N

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 2

IT 50-23-7, Cortisol 50-99-7, D Glucose, biological studies 52-90-4, Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 56-85-9, Glutamine, biological studies 56-87-1, Lysine, biological studies 57-83-0, Progesterone, biological studies 58-85-5, Biotin 59-23-4, D(+)-Galactose, biological studies 59-30-3, Folic acid, biological studies 59-43-8, Thiamine, biological studies 60-18-4, Tyrosine, biological studies 60-33-3, Linoleic acid, biological studies 61-90-5, Leucine, biological studies 63-68-3, Methionine, biological studies 63-91-2, Phenylalanine, biological studies 66-72-8, Pyridoxal 67-48-1, Choline chloride 68-19-9, Vitamin b12 70-18-8, Reduced glutathione, biological studies 70-47-3, Asparagine, biological studies 71-00-1, Histidine, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-22-3, Tryptophan, biological studies 73-32-5, Isoleucine, biological studies 74-79-3, Arginine, biological studies 83-88-5, Riboflavin, biological studies 87-89-8, myo-Inositol **98-92-0**, Niacinamide 110-60-1, Putrescine **113-24-6**, Sodium pyruvate 127-47-9, Retinyl acetate 137-08-6, Calcium D-pantothenate 141-43-5, Ethanolamine, biological studies 144-55-8, Sodium hydrogen carbonate, biological studies

phosphorus binder used, but was replaced by calcium-containing binders because of the development of aluminum toxicity. Calcium-based binders were the mainstay of therapy for many years, but recent investigations have pointed to increased rates of vascular calcification in patients taking calcium-containing binders. For this reason, alternative agents were developed. Sevelamer (Renagel, GelTex Pharmaceuticals Inc.) is a polymer which was found to effectively bind phosphorus. It has resulted in a decreased rate of vascular calcification compared to calcium-containing binders. Other agents under development include lanthanum carbonate and iron-complex prepns. Further research will likely concentrate on identifying binders that bind phosphate more efficiently, have minimal gastrointestinal side effects and provide other benefits to dialysis patients.

CC 1-0 (Pharmacology)

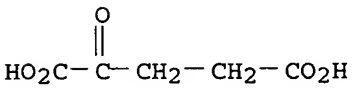
IT **Kidney, disease**
(failure; phosphate binder usage in kidney failure patients)

IT 62-54-4, Calcium acetate 471-34-1, Calcium carbonate, biological studies 587-26-8, Lanthanum carbonate 7429-90-5, Aluminum, biological studies **56095-64-8** 152751-57-0, Renagel
RL: ADV (Adverse effect, including toxicity); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(phosphate binder usage in kidney failure patients)

IT **56095-64-8**
RL: ADV (Adverse effect, including toxicity); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(phosphate binder usage in kidney failure patients)

RN 56095-64-8 HCAPLUS

CN Pentanedioic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



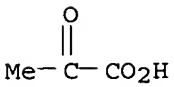
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 34 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:282706 HCAPLUS
DOCUMENT NUMBER: 138:292804
TITLE: Nutrient medium for maintaining neural cells in injured nervous system
INVENTOR(S): Brewer, Gregory J.
PATENT ASSIGNEE(S): Southern Illinois University, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

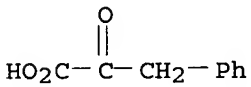
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

RL: PNU (Preparation, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

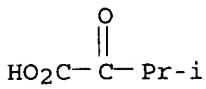
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 114-76-1 HCAPLUS
CN Benzenepropanoic acid, α-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 3715-29-5 HCAPLUS
CN Butanoic acid, 3-methyl-2-oxo-, sodium salt (9CI) (CA INDEX NAME)



L102 ANSWER 33 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:423597 HCAPLUS
DOCUMENT NUMBER: 140:22454
TITLE: Phosphate binder usage in kidney failure patients
AUTHOR(S): Bleyer, Anthony J.
CORPORATE SOURCE: Section on Nephrology, Wake Forest University School of Medicine, Winston-Salem, NC, 27157, USA
SOURCE: Expert Opinion on Pharmacotherapy (2003), 4(6), 941-947
CODEN: EOPHF7; ISSN: 1465-6566
PUBLISHER: Ashley Publications Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Phosphorus binders are used in patients with kidney failure because of the incomplete removal of phosphorus with dialysis and the inability to exclude phosphorus from the diet. Aluminum was the initial

disorders including spinocerebellar ataxia, CAG repeat disorders, and other ataxic disorders using the compds.; and pharmaceutically acceptable compns. that contain the inhibitors are disclosed.

IC ICM A61K031-00

CC 1-11 (Pharmacology)
Section cross-reference(s): 28, 63

IT Nervous system, disease
(ataxia, CAG repeat-associated; treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

IT Nervous system, disease
(ataxia; treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(g34872, inhibitors; treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

IT Genetic polymorphism
(in D-amino acid oxidase gene; treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

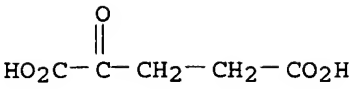
IT Nervous system, disease
(spinocerebellar ataxia; treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

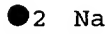
IT Central nervous system, disease
Human
Molecular cloning
Nervous system agents
Protein sequences
cDNA sequences
(treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

IT 9000-88-8, D-Amino acid oxidase 9029-20-3, D-Aspartate oxidase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

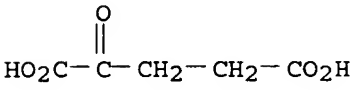
IT 54-21-7P 56-04-2P 57-83-0P, Pregn-4-ene-3,20-dione, biological studies 60-23-1P 60-56-0P 61-90-5P, L-Leucine, biological studies 62-56-6P, Thiourea, biological studies 65-85-0P, Benzoic acid, biological studies 70-23-5P 72-14-0P 79-19-6P, Hydrazinecarbothioamide 79-24-3P 87-25-2P 87-51-4P, 1H-Indole-3-acetic acid, biological studies 97-67-6P 99-05-8P **113-24-6P 114-76-1P** 118-92-3P 127-17-3P, biological studies 133-37-9P 134-20-3P 144-74-1P 147-71-7P 150-13-0P 150-83-4P 156-06-9P 156-39-8P 288-94-8P, 1H-Tetrazole 328-38-1P, D-Leucine 392-12-1P 501-30-4P 532-32-1P 542-05-2P 553-70-8P 578-36-9P 579-75-9P 600-22-6P 605-65-2P 611-73-4P 636-61-3P 771-50-6P, 1H-Indole-3-carboxylic acid 830-96-6P, 1H-Indole-3-propanoic acid 868-14-4P 879-37-8P, 1H-Indole-3-acetamide 996-19-0P 1075-06-5P 1091-85-6P 1201-26-9P 1721-26-2P 1912-33-0P 1937-19-5P 2456-73-7P 2524-52-9P 2582-30-1P **3715-29-5P** 5094-24-6P 5470-11-1P 5470-70-2P 6046-97-5P 6138-41-6P 6214-20-6P 7517-19-3P 7540-64-9P 10308-82-4P 15454-60-1P, 2H-Tetrazole-2,5-diamine 19764-30-8P 20095-27-6P 23234-80-2P 34523-28-9P 37141-50-7P 50428-03-0P 57105-39-2P 332360-02-8P 540466-64-6P 540466-65-7P
RL: PNU (Preparation, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors)

IT **113-24-6P 114-76-1P 3715-29-5P**





RN 71686-01-6 HCAPLUS
CN Pentanedioic acid, 2-oxo-, calcium salt (1:1) (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 32 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:454101 HCAPLUS
DOCUMENT NUMBER: 139:30834
TITLE: Treatment of **CNS disorders** using D-amino acid oxidase and D-aspartate oxidase inhibitors
INVENTOR(S): Moser, Paul
PATENT ASSIGNEE(S): Genset S.A., Fr.
SOURCE: PCT Int. Appl., 152 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003047558	A2	20030612	WO 2002-IB4805	20021029
WO 2003047558	A3	20040325		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002339696	A1	20030617	AU 2002-339696	20021029
PRIORITY APPLN. INFO.:			US 2001-336583P	P 20011203
			WO 2002-IB4805	W 20021029

AB The present invention relates to compds. that are inhibitors of D-amino acid oxidase, D-aspartate oxidase, or g34872; methods of treating CNS

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003055508	A1	20030710	WO 2002-SE2381	20021219
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002359171	A1	20030715	AU 2002-359171	20021219
PRIORITY APPLN. INFO.:			SE 2001-4404 A	20011221
			SE 2002-256 A	20020129
			WO 2002-SE2381 W	20021219

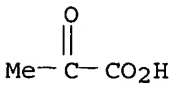
AB A composition comprising phytohemagglutinin (PHA), and glutamine, glutamine derivs. or metabolites, glutamine analogs or mixts. is disclosed. Also, a food and feed supply and a pharmaceutical composition are disclosed. Such compns. may be used for prevention, treatment and alleviation of immature GIT, or renal failure. Also contemplated are methods for obtaining mature GIT by administration of above compns., and a method for treatment, prevention and alleviation of renal failure. Results of experiment trilas show that it is possible to divert the excretion of N from the urine to the feces, using PHA in combination with α-ketoglutaric acid.

IC ICM A61K038-16
ICS A61K031-195; A23L001-305
CC 1-10 (Pharmacology)
Section cross-reference(s): 17
IT **Kidney, disease**
(failure; phytohemagglutinin and glutamine derivative composition for the treatment of renal failure or gastric dysfunction)
IT 56-85-9, Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 142-47-2, Sodium glutamate **305-72-6** 13115-71-4, Glycyl-L-glutamine 26848-14-6 39537-23-0, L-Alanyl-L-glutamine **71686-01-6** 204774-97-0 556813-51-5 556834-43-6 556834-44-7 556834-45-8 556834-47-0
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(phytohemagglutinin and glutamine derivative composition for the treatment of renal failure or gastric dysfunction)
IT **305-72-6 71686-01-6**
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(phytohemagglutinin and glutamine derivative composition for the treatment of renal failure or gastric dysfunction)
RN 305-72-6 HCAPLUS
CN Pentanedioic acid, 2-oxo-, disodium salt (9CI) (CA INDEX NAME)

WO 1998-IT173 W 19980624
US 2000-446729 A2 20000303
WO 2003-US1226 W 20030115

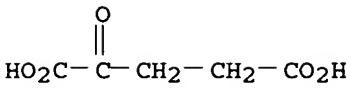
AB The invention provides a system for preparing an autologous solid-fibrin web suitable for regenerating tissue in a living organism. The system includes a sealed primary container containing a separation medium and a low-d. high-viscosity liquid The separation medium is capable of separating red blood cells from plasma when the container contains blood and is centrifuged, and the primary container has a first pressure. The system further includes a sealed secondary container containing a calcium-coagulation activator. The secondary container has a second pressure that is less than the first pressure. The system also comprises a transfer device including a cannula having a first end and a second end. The first and second ends are capable of puncturing the sealed primary and secondary containers in order to provide fluid communication between the first and second containers. The low-d. high-viscosity liquid of the primary container is capable of blocking flow through the cannula upon entering therein.

IC ICM A61L024-10
CC 63-7 (Pharmaceuticals)
IT Analgesics
Antibiotics
Anticoagulants
Antitumor agents
Erythrocyte
Neoplasm
Prosthetic materials and Prosthetics
(methods for preparing autologous fibrin glue)
IT 299-28-5, Calcium gluconate 471-34-1, Calcium carbonate, biological studies 3416-22-6, Calcium fumarate 7789-75-5, Calcium fluoride, biological studies 10043-52-4, Calcium chloride, biological studies **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(methods for preparing autologous fibrin glue)
IT **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(methods for preparing autologous fibrin glue)
RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



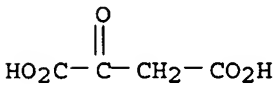
●1/2 Ca

L102 ANSWER 31 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:532536 HCAPLUS
DOCUMENT NUMBER: 139:79159
TITLE: Phytohemagglutinin and glutamine derivative composition for the treatment of renal failure or gastric dysfunction
INVENTOR(S): Pierzynowski, Stefan G.
PATENT ASSIGNEE(S): Gramineer International AB, Swed.
SOURCE: PCT Int. Appl., 49 pp.



● Na

RN 24567-12-2 HCAPLUS
CN Butanedioic acid, oxo-, sodium salt (9CI) (CA INDEX NAME)



●x Na

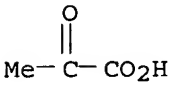
L102 ANSWER 30 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:570861 HCAPLUS
DOCUMENT NUMBER: 139:122832
TITLE: Methods for preparing autologous fibrin glue
INVENTOR(S): Beretta, Roberto; Grippi, Nicholas A.
PATENT ASSIGNEE(S): Italy
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003059405	A2	20030724	WO 2003-US1226	20030115
WO 2003059405	A3	20040205		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002169408	A1	20021114	US 2002-53247	20020115
US 6979307	B2	20051227		
AU 2003205157	A1	20030730	AU 2003-205157	20030115
EP 1465675	A2	20041013	EP 2003-703826	20030115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005514987	T2	20050526	JP 2003-559565	20030115
PRIORITY APPLN. INFO.:			US 2002-53247 A	20020115
			IT 1997-MI1490 A	19970624

which cause pain, erythema, swelling, crusting, ischemia scarring and excess white blood cell infiltration)

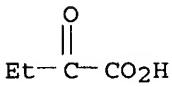
IT **113-24-6**, Sodium pyruvate **2013-26-5 4502-00-5**
22202-68-2 24567-12-2, Oxalacetic acid sodium salt
RL: BSU (Biological study, unclassified); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study);
USES (Uses)
(α-keto acid composition for treating mammalian diseases and injuries which cause pain, erythema, swelling, crusting, ischemia scarring and excess white blood cell infiltration)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



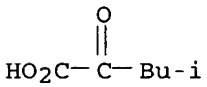
● Na

RN 2013-26-5 HCAPLUS
CN Butanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 4502-00-5 HCAPLUS
CN Pentanoic acid, 4-methyl-2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

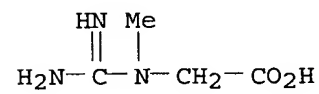
RN 22202-68-2 HCAPLUS
CN Pentanedioic acid, 2-oxo-, monosodium salt (9CI) (CA INDEX NAME)

inflammatory response such as pain, swelling, erythema, crusting, scarring, itching, also disclosed. Five α-keto acids were compared for their effects on the rate of cutaneous healing. All five were effective. Active agent α-keto-isovaleric acid, sodium salt was selected for further evaluation.

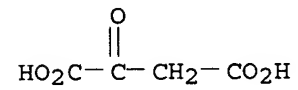
IC ICM A61K038-43
ICS A61K038-19; A61K031-56; A61K031-315; A61K031-19
INCL 424085100; 424094100; 514171000; 514557000; 514492000; 514494000
CC 1-7 (Pharmacology)
IT **Angiogenesis**
(reduction of excess; α-keto acid composition for treating mammalian diseases and injuries which cause pain, erythema, swelling, crusting, ischemia scarring and excess white blood cell infiltration)
IT Analgesics
Angiogenesis inhibitors
Anti-inflammatory agents
Antibacterial agents
Antihistamines
Antioxidants
Antitumor agents
Antiviral agents
Cosmetics
Disease, animal
Erythema
Fungicides
Granulation tissue
Human
Inflammation
Injury
Ischemia
Keloid
Leukocyte
Mammalia
Metabolism, animal
Oxidative stress, biological
Pain
Pruritus
Skin, disease
Swelling, biological
Wound
Wound healing
Wound healing promoters
(α-keto acid composition for treating mammalian diseases and injuries which cause pain, erythema, swelling, crusting, ischemia scarring and excess white blood cell infiltration)
IT **113-24-6**, Sodium pyruvate 127-17-3, biological studies
328-42-7 328-50-7 600-18-0 816-66-0 **2013-26-5** 2492-75-3
3184-35-8 **4502-00-5** 7429-90-5D, Aluminum, salts with α-keto acids 7439-93-2D, Lithium, salts with α-keto acids 7439-95-4D, Magnesium, salts with α-keto acids 7439-96-5D, Manganese, salts with α-keto acids 7440-09-7D, Potassium, salts with α-keto acids 7440-23-5D, Sodium, salts with α-keto acids 7440-66-6D, Zinc, salts with α-keto acids 7440-70-2D, Calcium, salts with α-keto acids 14798-03-9D, Ammonium, salts with α-keto acids **22202-68-2 24567-12-2**, Oxalacetic acid sodium salt
RL: BSU (Biological study, unclassified); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(α-keto acid composition for treating mammalian diseases and injuries

(nutritional supplement containing creatine, an acid component and/or a complexing agent for improvement of muscle and nerve health.)

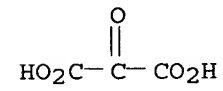
RN 57-00-1 HCAPLUS
CN Glycine, N-(aminoiminomethyl)-N-methyl- (9CI) (CA INDEX NAME)



RN 328-42-7 HCAPLUS
CN Butanedioic acid, oxo- (9CI) (CA INDEX NAME)



RN 473-90-5 HCAPLUS
CN Propanedioic acid, oxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 29 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:696288 HCAPLUS
DOCUMENT NUMBER: 139:207780
TITLE: Method and composition for treating mammalian diseases and injuries which cause pain, erythema, swelling, crusting, ischemia scarring and excess white blood cell infiltration
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003165457	A1	20030904	US 2001-950490	20010911
PRIORITY APPLN. INFO.:			US 2001-950490	20010911

AB A method for treating the disease state in mammals caused by mammalian cells involved in the inflammatory response is disclosed. Mammalian cells participating in the inflammatory response are contacted with an antioxidant inflammatory suppressor selected from the group consisting of alpha-keto acids and their salts which reduce the undesired inflammatory response. The inflammatory suppressor may further provide a cellular energy source and be a building block in the cellular synthesis of other cellular components. Compns. for reducing and treating undesired

L-Tyrosine, biological studies 60-33-3, Linoleic acid, biological studies 61-90-5, L-Leucine, biological studies 62-49-7, Choline 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 65-85-0, Benzoic acid, biological studies 67-52-7, Barbituric acid 69-72-7, Salicylic acid, biological studies 69-93-2, Uric acid, biological studies 70-18-8, Glutathione, biological studies 70-26-8, L-Ornithine 70-47-3, L-Asparagine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 73-22-3, L-Tryptophan, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies 75-75-2, Methanesulfonic acid 79-10-7, Acrylic acid, biological studies 79-14-1, Glycolic acid, biological studies 79-31-2, Isobutyric acid 79-41-4, Methacrylic acid, biological studies 79-83-4, Pantothenic acid 83-86-3, Phytic acid 88-14-2, 2-Furancarboxylic acid 88-99-3, Phthalic acid, biological studies 90-64-2, Mandelic acid 97-65-4, Itaconic acid, biological studies 98-11-3, Benzenesulfonic acid, biological studies 98-79-3 99-05-8, 3-Aminobenzoic acid 99-06-9, 3-Hydroxybenzoic acid, biological studies 99-96-7, 4-Hydroxybenzoic acid, biological studies 100-21-0, Terephthalic acid, biological studies 103-82-2, Phenylacetic acid, biological studies 104-15-4, p-Toluenesulfonic acid, biological studies 104-98-3, Urocanic acid 107-92-6, Butyric acid, biological studies 107-95-9, β-Alanine 107-97-1, N-Methylglycine 108-80-5, Cyanuric acid 110-15-6, Succinic acid, biological studies 110-44-1, Sorbic acid 110-94-1, Glutaric acid 111-14-8, Heptanoic acid 111-16-0, Pimelic acid 111-20-6, Sebacic acid, biological studies 112-37-8, Undecanoic acid 118-92-3, 2-Aminobenzoic acid 123-99-9, Azelaic acid, biological studies 124-04-9, Adipic acid, biological studies 124-07-2, Octanoic acid, biological studies 141-78-6, Ethyl acetate, biological studies 141-82-2, Malonic acid, biological studies 142-62-1, Hexanoic acid, biological studies 143-07-7, Dodecanoic acid, biological studies 144-62-7, Oxalic acid, biological studies 147-85-3, L-Proline, biological studies 150-13-0, 4-Aminobenzoic acid 305-84-0, Carnosine 320-77-4, Isocitric acid **328-42-7**, Oxalacetic acid 334-48-5, Decanoic acid 463-40-1, Linolenic acid 473-81-4, Glyceric acid **473-90-5**, Mesoxalic acid 495-69-2, Hippuric acid 498-24-8, Mesaconic acid 505-48-6, Suberic acid 506-32-1, Arachidonic acid 526-95-4, Gluconic acid 535-75-1, Pipecolic acid 541-48-0, β-Aminobutyric acid 541-50-4, Acetoacetic acid, biological studies 544-63-8, Tetradecanoic acid, biological studies 585-84-2, cis-Aconitic acid 621-82-9, Cinnamic acid, biological studies 1493-13-6, Trifluoromethanesulfonic acid 2033-24-1, Meldrumic acid 2835-81-6, α-Aminobutyric acid 3724-65-0, Crotonic acid 4023-65-8, trans-Aconitic acid 4350-09-8, 5-Hydroxytryptophan 5329-14-6, Sulfamic acid 6205-14-7, Hydroxycitric acid 6556-12-3, D-Glucuronic acid 7631-86-9, Silica, biological studies 7664-38-2D, Phosphoric acid, esters 9000-07-1, Carrageenan 9003-01-4, Polyacrylic acid 9004-32-4, Carboxymethylcellulose sodium **salt** 9004-34-6, Cellulose, biological studies 9005-32-7, Alginic acid 10043-35-3, Boric acid, biological studies 11138-66-2, Xanthan 25525-21-7, Glucaric acid 51750-56-2, Propanetricarboxylic acid
RL: COS (Cosmetic use); FFD (Food or feed use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(nutritional supplement containing creatine, an acid component and/or a complexing agent for improvement of muscle and nerve health.)

IT **57-00-1**, Creatine **328-42-7**, Oxalacetic acid **473-90-5**, Mesoxalic acid
RL: COS (Cosmetic use); FFD (Food or feed use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

L102 ANSWER 28 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:696654 HCAPLUS
DOCUMENT NUMBER: 139:229691
TITLE: Nutritional supplement containing creatine, an acid component and/or a complexing agent for improvement of muscle and nerve health.
INVENTOR(S): Purpura, Martin; Jaeger, Ralf; Koenig, Harro
PATENT ASSIGNEE(S): Degussa Bioactives G.m.b.H., Germany
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003071884	A1	20030904	WO 2003-EP2042	20030227
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10208568	A1	20030918	DE 2002-10208568	20020227
AU 2003215607	A1	20030909	AU 2003-215607	20030227
PRIORITY APPLN. INFO.:			DE 2002-10208568 A	20020227
			WO 2003-EP2042 W	20030227

AB The invention relates to a compound containing creatine, an acid component and/or a complexing agent. The invention also relates to methods for producing said compound, to a formulation containing the same, and to the use of the inventive compound
IC ICM A23L001-305
ICS A61K031-155; A61P003-00; C07C279-14
CC 17-6 (Food and Feed Chemistry)
Section cross-reference(s): 18, 62, 63
IT Alcohols, biological studies
Carbohydrates, biological studies
RL: COS (Cosmetic use); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**phosphorylated**; nutritional supplement containing creatine, an acid component and/or a complexing agent for improvement of muscle and nerve health.)
IT 50-21-5, Lactic acid, biological studies 50-71-5, Alloxan 51-35-4, 4-Hydroxyproline 52-90-4, Cysteine, biological studies 56-12-2, γ-Aminobutyric acid, biological studies 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, Cystine, biological studies **57-00-1**, Creatine 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 57-50-1, Sucrose, biological studies 58-85-5, Biotin 59-67-6, Nicotinic acid, biological studies 60-18-4,

TITLE: An antioxidant formulation that induces differentiation of neuroblastoma in culture

AUTHOR(S): Hancock, Amy L.; Nakuci, Enkeleda; Nicolosi, Robert J.; Shea, Thomas B.

CORPORATE SOURCE: Center for Cellular Neurobiology and Neurodegeneration Research, Dept. of Biological Sciences, Health and Clinical Sciences, University of Massachusetts, Lowell, MA, 01854, USA

SOURCE: Neuroscience Research Communications (2003), 33(1), 73-76
CODEN: NRCOEE; ISSN: 0893-6609

PUBLISHER: Wiley-Liss, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Neuroblastoma, the most common of all cancers found in children, may arise from a block of differentiation and a resultant continuation of the proliferative state. Neuroblastoma often spontaneously revert by undergoing partial differentiation and ultimate degeneration. A useful therapeutic approach for clin. neuroblastoma may encompass strategies to force neuroblastoma to differentiate. In ongoing studies on neuronal health, we have developed an anti-oxidant synergy formulation ("ASF"), comprised of α-tocopherol (vitamin E), sodium pyruvate and phosphatidyl choline, which lessens neurotoxicity and promotes axonal elaboration in cultured neurons. We demonstrate herein that ASF prevents proliferation and promotes differentiation of neuroblastoma in culture, even in the presence of serum, which normally induces rapid neuroblastoma proliferation in culture. These data leave open the possibility that ASF, with proper administration, may foster differentiation, and therefore ultimate degeneration, of neuroblastoma in situ, and may therefore represent a novel approach towards suppression of clin. neuroblastoma.

CC 1-6 (Pharmacology)
Section cross-reference(s): 63

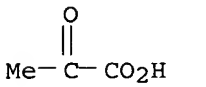
IT Nerve, **neoplasm**
(neuroblastoma; antioxidant formulation that induces differentiation of neuroblastoma in culture)

IT 59-02-9, α-Tocopherol **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antioxidant formulation that induces differentiation of neuroblastoma in culture)

IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antioxidant formulation that induces differentiation of neuroblastoma in culture)

RN 113-24-6 HCAPLUS

CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

INVENTOR(S): Lavrent, Andrew George
PATENT ASSIGNEE(S): Immuno Laboratories Limited, N. Z.
SOURCE: N.Z., 8 pp.
CODEN: NZXXBT
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NZ 330439	A	20010126	NZ 1998-330439	19980515
AU 9929071	A1	19991125	AU 1999-29071	19990517
PRIORITY APPLN. INFO.:			NZ 1998-330439 A	19980515
			NZ 1998-330727 A	19980618

AB Dietary compns. suitable for weight loss or as supplements are described. The composition consists of collagen hydrolyzate 1-55, A. vera 0.3-0.5, hydroxycitric acid 0.1-10, and L-carnitine 0.1-10% and water. The composition also contains calcium pyruvate, citric acid, N-acetylcarnitine, glycerin, methylparaben, sorbitol, lipoic acid, potassium sorbate, sodium benzoate, flavorings, a sweetener and chromium compds.

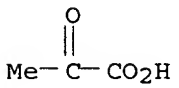
IC ICM A23L001-304
ICS A23L001-29; A23L002-00; A23L001-305

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 11, 18

IT 50-21-5, Lactic acid, biological studies 50-70-4, Sorbitol, biological studies 56-81-5, Glycerin, biological studies 59-67-6D, Nicotinic acid, reaction with chromium 77-92-9, Citric acid, biological studies 87-69-4, Tartaric acid, biological studies 98-98-6D, Picolinic acid, reaction with chromium 99-76-3, Methyl paraben 532-32-1, Sodium benzoate 541-15-1, L-Carnitine 1200-22-2, Lipoic acid 7440-47-3D, Chromium, reaction with picolinic and nicotinic acids, soy protein chelates 24634-61-5, Potassium sorbate 27750-10-3, Hydroxy citric acid **52009-14-0**, Calcium pyruvate 125349-24-8
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**;
BIOL (Biological study); USES (Uses)
(dietary supplements containing collagen hydrolyzate and Aloe vera and hydroxycitric acid and carnitine and water for weight loss)

IT **52009-14-0**, Calcium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**;
BIOL (Biological study); USES (Uses)
(dietary supplements containing collagen hydrolyzate and Aloe vera and hydroxycitric acid and carnitine and water for weight loss)

RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 27 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:786826 HCAPLUS
DOCUMENT NUMBER: 140:156897

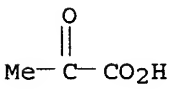
Glaucoma (disease)
Human
Human immunodeficiency virus
Nervous system agents
(glutamate-modifying enzymes, cofactors, and glutamate synthesizing enzyme inhibitors for protecting neuronal tissue from damage induced by elevated glutamate levels)

IT Brain, disease
(**stroke**; glutamate-modifying enzymes, cofactors, and glutamate synthesizing enzyme inhibitors for protecting neuronal tissue from damage induced by elevated glutamate levels)

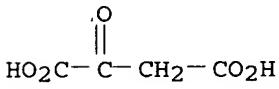
IT **113-24-6**, Sodium pyruvate 127-17-3, biological studies
328-42-7 **24567-12-2**, Sodium oxaloacetate
RL: **PAC (Pharmacological activity)**; **PKT (Pharmacokinetics)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(glutamate-modifying enzymes, cofactors, and glutamate synthesizing enzyme inhibitors for protecting neuronal tissue from damage induced by elevated glutamate levels)

IT **113-24-6**, Sodium pyruvate **24567-12-2**, Sodium oxaloacetate
RL: **PAC (Pharmacological activity)**; **PKT (Pharmacokinetics)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(glutamate-modifying enzymes, cofactors, and glutamate synthesizing enzyme inhibitors for protecting neuronal tissue from damage induced by elevated glutamate levels)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 24567-12-2 HCAPLUS
CN Butanedioic acid, oxo-, sodium salt (9CI) (CA INDEX NAME)



L102 ANSWER 26 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:905034 HCAPLUS
DOCUMENT NUMBER: 140:169630
TITLE: Dietary supplements containing collagen hydrolyzate, Aloe vera, hydroxycitric acid, L-carnitine and water for weight loss

levels
INVENTOR(S): Teichberg, Vivian I.
PATENT ASSIGNEE(S): Yeda Research and Development Co. Ltd., Israel
SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004012762	A2	20040212	WO 2003-IL634	20030731
WO 2004012762	A3	20040617		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2494348	AA	20040212	CA 2003-2494348	20030731
AU 2003247143	A1	20040223	AU 2003-247143	20030731
EP 1524989	A2	20050427	EP 2003-766600	20030731
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2006024284	A1	20060202	US 2005-522415	20050126
PRIORITY APPLN. INFO.:			US 2002-399708P P	20020801
			US 2002-430689P P	20021204
			WO 2003-IL634 W	20030731

AB The invention discloses a method for reducing extracellular brain glutamate levels. The method comprises administering to a subject in need thereof a therapeutically effective amount of an agent capable of reducing blood glutamate levels thereby reducing extracellular brain glutamate levels. The methodol. of the invention uses glutamate-modifying enzymes, cofactors of these enzymes, and glutamate synthesizing enzyme inhibitors.

IC ICM A61K038-43
ICS A61K038-44; A61K038-45; A61K031-19
CC 1-11 (Pharmacology)
IT Meningitis
(**bacterial**; glutamate-modifying enzymes, cofactors, and glutamate synthesizing enzyme inhibitors for protecting neuronal tissue from damage induced by elevated glutamate levels)
IT Mental and behavioral disorders
(**dementia**; glutamate-modifying enzymes, cofactors, and glutamate synthesizing enzyme inhibitors for protecting neuronal tissue from damage induced by elevated glutamate levels)
IT **Alzheimer**'s disease
Anti-**Alzheimer**'s agents
Anticonvulsants
Antiglaucoma agents
Brain
Brain, disease
Cerebrospinal fluid
Drug delivery systems
Drug interactions
Epilepsy

barrier dysfunction, ileal mucosal hyperpermeability, **bacterial** translocation, hepatocellular injury, iNOS induction, NO synthesis or pro-inflammatory cytokine in mouse)

IT Intestine
(epithelium; EP pretreatment provide durable protection against LPS-induced gut barrier dysfunction, ileal mucosal hyperpermeability, **bacterial** translocation, hepatocellular injury, iNOS induction, NO synthesis or pro-inflammatory cytokine in mouse)

IT Injury
(hepatic; EP pretreatment provide durable protection against LPS-induced gut barrier dysfunction, ileal mucosal hyperpermeability, **bacterial** translocation, hepatocellular injury, iNOS induction, NO synthesis or pro-inflammatory cytokine in mouse)

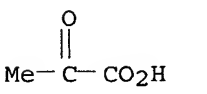
IT Liver, disease
(injury; EP pretreatment provide durable protection against LPS-induced gut barrier dysfunction, ileal mucosal hyperpermeability, **bacterial** translocation, hepatocellular injury, iNOS induction, NO synthesis or pro-inflammatory cytokine in mouse)

IT Epithelium
(intestinal; EP pretreatment provide durable protection against LPS-induced gut barrier dysfunction, ileal mucosal hyperpermeability, **bacterial** translocation, hepatocellular injury, iNOS induction, NO synthesis or pro-inflammatory cytokine in mouse)

IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(EP pretreatment in mouse provides durable protection against some of deleterious effect of LPS or pro-inflammatory cytokines and decreases LPS-induced NO synthesis more effectively than treatment with sodium pyruvate)

IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(EP pretreatment in mouse provides durable protection against some of deleterious effect of LPS or pro-inflammatory cytokines and decreases LPS-induced NO synthesis more effectively than treatment with sodium pyruvate)

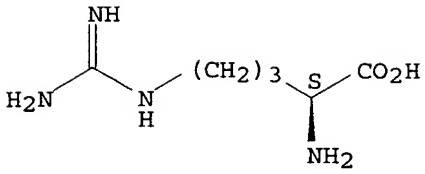
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 25 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:120743 HCAPLUS
DOCUMENT NUMBER: 140:157478
TITLE: Methods and compositions using glutamate-modifying enzymes, cofactors of these enzymes, and glutamate synthesizing enzyme inhibitors for protecting neuronal tissue from damage induced by elevated glutamate

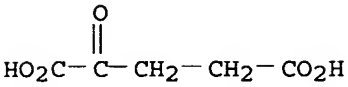


L102 ANSWER 24 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:292409 HCAPLUS
DOCUMENT NUMBER: 141:307208
TITLE: Ethyl pyruvate provides durable protection against inflammation-induced intestinal epithelial barrier dysfunction
AUTHOR(S): Sappington, Penny L.; Fink, Matthew E.; Yang, Runkuan; Delude, Russell L.; Fink, Mitchell P.
CORPORATE SOURCE: Department of Critical Care Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, 15261, USA
SOURCE: Shock (2003), 20(6), 521-528
CODEN: SAGUAI; ISSN: 1073-2322
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Et pyruvate (EP) has been shown to be an effective anti-inflammatory agent. Herein, we sought to test the following hypotheses: (1) the pharmacol. effects of EP persist after cells have been exposed to the compound in vitro, even if the cultures are washed to minimize the amount of EP that is retained in the media; (2) the pharmacol. effects of EP persist in vivo, even after waiting a prolonged period (i.e., 6 h) after the last dose of the compound; and (3) the in vivo pharmacol. effects of EP are distinct from those of the closely related compound, sodium pyruvate. Incubation of Caco-2 human enterocyte-like monolayers with cytomix, a mixture of interleukin-1β, interferon-γ, and tumor necrosis factor, increased permeability to the fluorescent macromol., FITC-labeled Dextran (mol wt 4,000 Da). Co-incubation of the cells with 5 mM EP ameliorated cytomix-induced hyperpermeability and induction of iNOS mRNA expression. EP was associated with similar pharmacol. effects when cells were pre-incubated with the compound for 24 h prior and then washed extensively prior to adding the cytokine cocktail. Injecting C57BI/6 mice with lipopolysaccharide (LPS) resulted in gut barrier dysfunction and hepatocellular injury. Although equivalent doses of both EP and sodium pyruvate ameliorated these phenomena, EP was more efficacious than pyruvate. Pretreatment with EP ameliorated the deleterious effects of LPS, even when the duration between the last dose of EP and the endotoxic challenge was 6 h. We conclude that EP provides durable protection against some of the deleterious effects of LPS or pro-inflammatory cytokines.

CC 1-7 (Pharmacology)
IT Lipopolysaccharides
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(EP pretreatment protect against LPS-induced ileal mucosal hyperpermeability, **bacterial** translocation, hepatocellular injury, iNOS induction, NO synthesis in mouse better than sodium pyruvate)
IT Human
Liver
(EP pretreatment provide durable protection against LPS-induced gut

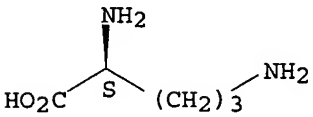
CMF C5 H6 O5



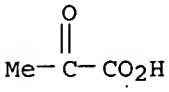
CM 2

CRN 70-26-8
CMF C5 H12 N2 O2

Absolute stereochemistry.



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

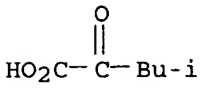


●1/2 Ca

RN 72087-40-2 HCAPLUS
CN L-Arginine, mono(4-methyl-2-oxopentanoate) (9CI) (CA INDEX NAME)

CM 1

CRN 816-66-0
CMF C6 H10 O3



CM 2

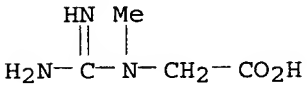
CRN 74-79-3
CMF C6 H14 N4 O2

Absolute stereochemistry.

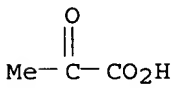
7439-96-5, Manganese, biological studies 7439-98-7, Molybdenum, biological studies 7440-09-7, Potassium, biological studies 7440-23-5, Sodium, biological studies 7440-47-3, Chromium, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies 7440-70-2, Calcium, biological studies 7553-56-2, Iodine, biological studies 7723-14-0, Phosphorus, biological studies 7782-49-2, Selenium, biological studies 8059-24-3, Vitamin B6 9050-36-6, Maltodextrin 10284-63-6, Inzitol 10417-94-4, Eicosapentaenoic acid 11103-57-4, Vitamin A 12001-76-2, Vitamin B 12001-79-5, Vitamin K 14265-44-2, Phosphate, biological studies 16887-00-6, Chloride, biological studies **34414-83-0**, Ornithine α-ketoglutarate **52009-14-0**, Calcium pyruvate 55399-93-4 56038-13-2, Splenda **72087-40-2**
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(agglomerated granular protein-rich nutritional supplement)

IT **57-00-1**, **Creatine 127-17-3D**, Pyruvic acid, derivs. **4151-33-1**, Potassium pyruvate **34414-83-0**, Ornithine α-ketoglutarate **52009-14-0**, Calcium pyruvate **72087-40-2**
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(agglomerated granular protein-rich nutritional supplement)

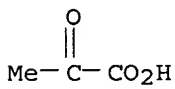
RN 57-00-1 HCAPLUS
CN Glycine, N-(aminoiminomethyl)-N-methyl- (9CI) (CA INDEX NAME)



RN 127-17-3 HCAPLUS
CN Propanoic acid, 2-oxo- (9CI) (CA INDEX NAME)



RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



RN 34414-83-0 HCAPLUS
CN L-Ornithine, 2-oxopentanedioate (9CI) (CA INDEX NAME)

CM 1

CRN 328-50-7

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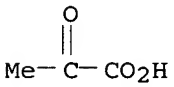
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003287150	A1	20040504	AU 2003-287150	20031015
PRIORITY APPLN. INFO.:			US 2002-271239	A 20021015
			WO 2003-US32646	W 20031015

AB An agglomerated granular protein-rich nutritional supplement comprises a mixture of: 13-100 percent by weight edible food proteins; 0-57 percent by weight edible carbohydrates; 0-10 percent by weight edible fats; 0-15 percent by weight edible dietary vitamins and minerals; 0-78 percent by weight edible amino acids; 0-10 percent by weight edible plant exts., and up to 4 percent by weight chondroitin sulfate, where the nutritional supplement is agglomerated and granulated in an oral unit dosage form that is directly absorbable onto the tongue or rapidly dissolvable in an aqueous liquid Specific formulations of the supplement are disclosed, for use by specific groups of individuals. A method of supplementing the nutritional intake of individuals engaged in bodybuilding and protein supplementation, meal replacement, exercise recovery or mass gaining, comprising orally administering a formulation of the protein-rich nutritional supplement. A method of augmenting the mental acuity and energy of humans, comprising orally administering another formulation of the protein-rich nutritional supplement. Methods also are disclosed for supplementing the nutritional intake of women, male bodybuilders, children and adolescents, and older adults. In all methods, the nutritional supplement is in an oral unit dosage form of either agglomerated granules or a rapidly dissolvable wafer and also includes a flavoring compound and an effervescing compound

IC ICM A23L001-30
INCL 426072000; 426656000
CC 17-6 (Food and Feed Chemistry)
Section cross-reference(s): 18, 63
IT 50-69-1, Ribose 50-81-7, Vitamin C, biological studies 50-99-7, Dextrose, biological studies 56-41-7, L-Alanine, biological studies 56-85-9, Glutamine, biological studies 56-85-9D, L-Glutamine, peptides containing 56-87-1, Lysine, biological studies **57-00-1**, **Creatine** 57-48-7, Fructose, biological studies 58-08-2, Caffeine, biological studies 58-85-5, Biotin 59-30-3, Folic acid, biological studies 59-43-8, Thiamin, biological studies 59-67-6, Niacin, biological studies 60-18-4, Tyrosine, biological studies 61-90-5, L-Leucine, biological studies 63-91-2, Phenylalanine, biological studies 68-19-9, Vitamin B12 70-47-3, L-Asparagine, biological studies 72-18-4, Valine, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, Arginine, biological studies 79-83-4, Pantothenic acid 83-88-5, Riboflavin, biological studies 98-79-3, Pyroglutamic acid 107-35-7, Taurine 108-01-0, DMAE **127-17-3D**, Pyruvic acid, derivs. 146-48-5, Yohimbine 625-08-1, β-Hydroxy-β-methylbutyric acid 1406-16-2, Vitamin D 1406-18-4, Vitamin E 3416-24-8, Glucosamine **4151-33-1**, Potassium pyruvate 4547-24-4 6020-87-7, **Creatine** monohydrate 6217-54-5, Docosahexaenoic acid 7235-40-7, β-Carotene 7439-89-6, Iron, biological studies 7439-95-4, Magnesium, biological studies

IT **Angiogenesis** inhibitors
Antioxidants
(antioxidants inhibit **angiogenesis** through down-regulation of NOS expression and activity)
IT Reactive oxygen species
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antioxidants inhibit **angiogenesis** through down-regulation of NOS expression and activity)
IT 7782-44-7D, Oxygen, reactive species 77106-92-4, NAD(P)H oxidase 501433-35-8, Inducible nitric oxide synthase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antioxidants inhibit **angiogenesis** through down-regulation of NOS expression and activity)
IT 50-02-2, Dexamethasone **113-24-6**, Sodium pyruvate 315-30-0, Allopurinol 498-02-2, Apocynin 2226-96-2, Tempol 7722-84-1, Hydrogen peroxide, biological studies 9001-05-2, Catalase 9054-89-1, Superoxide dismutase 34284-75-8, 4-(2-Aminoethyl) benzenesulfonyl fluoride 50903-99-6, L-NAME 141968-19-6, D-NAME
RL: **PAC (Pharmacological activity)**; BIOL (Biological study)
(antioxidants inhibit **angiogenesis** through down-regulation of NOS expression and activity)
IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; BIOL (Biological study)
(antioxidants inhibit **angiogenesis** through down-regulation of NOS expression and activity)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)

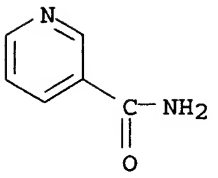


● Na

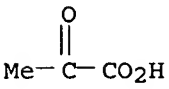
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 23 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:310653 HCAPLUS
DOCUMENT NUMBER: 140:320327
TITLE: Agglomerated granular protein-rich nutritional supplement
INVENTOR(S): Lockwood, Christopher
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004071825	A1	20040415	US 2002-271239	20021015
WO 2004034986	A2	20040429	WO 2003-US32646	20031015
WO 2004034986	A3	20050120		



RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 22 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:405379 HCAPLUS
DOCUMENT NUMBER: 140:385780
TITLE: Antioxidants inhibit **angiogenesis** in vivo through down-regulation of nitric oxide synthase expression and activity
AUTHOR(S): Polytarchou, Christos; Papadimitriou, Evangelia
CORPORATE SOURCE: Laboratory of Molecular Pharmacology, Department of Pharmacy, University of Patras, Patras, 26504, Greece
SOURCE: Free Radical Research (2004), 38(5), 501-508
CODEN: FRARER; ISSN: 1071-5762
PUBLISHER: Taylor & Francis Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Although reactive oxygen species (ROS) participate in many cellular mechanisms, only few data exist concerning their involvement in physiol. angiogenesis. The aim of the present work was to elucidate possible mechanisms through which ROS affect angiogenesis in vivo, using the model of the chicken embryo chorioallantoic membrane (CAM). Superoxide dismutase (SOD) and its membrane permeable mimetic tempol, dose dependently decreased angiogenesis and down-regulated inducible nitric oxide synthase (iNOS) expression and nitric oxide (NO) production The NADPH oxidase inhibitors, 4-(2-aminoethyl)-benzenesulfonyl fluoride (AEBSF) and apocynin, but not allopurinol, also had a dose dependent inhibitory effect on angiogenesis and NO production in vivo. Catalase and the intracellular hydrogen peroxide (H2O2) scavenger sodium pyruvate decreased, while H2O2 increased in a dose-dependent manner the number of CAM blood vessels, as well as the expression and activity of iNOS. Dexamethasone, which down-regulated NO production by iNOS and L-NAME, but not D-NAME, dose dependently decreased angiogenesis in vivo. These data suggest that antioxidants affect physiol. angiogenesis in vivo, through regulation of NOS expression and activity.

CC 1-8 (Pharmacology)
ST antioxidant **angiogenesis** inhibition oxidative stress NOS expression

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
PRIORITY APPLN. INFO.: FR 2002-16722 A3 20021226
WO 2003-FR3917 W 20031226

AB A trophic composition in an aqueous medium comprises a complex nutrition base consisting of amino acids, vitamins, trace elements, and metallic salts, the above composition excluding any cellular growth promoter, cellular or animal exts. and a therapeutic substance. The composition comprises in addition to the nutrition complex, an inhibitor of collagenase from the corneal epithelium in humans or animals, and a promoter of the synthesis of neocollagens. A pH ranging 7.3-7.5 and osmolarity ranging 300-350 milli-Osmolar is established.

IC ICM A61K121-00
ICS A61P027-02

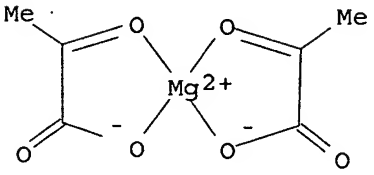
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

IT 50-89-5, Thymidine, biological studies 50-99-7, Glucose, biological studies 51-35-4, Hydroxyproline 52-89-1, Cysteine hydrochloride 52-90-4, Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 56-84-8, Aspartic acid, biological studies 56-85-9, Glutamine, biological studies 56-86-0, Glutamic acid, biological studies 58-56-0, Pyridoxine hydrochloride 58-85-5, Biotin 59-30-3, Folic acid, biological studies 60-18-4, Tyrosine, biological studies 61-90-5, Leucine, biological studies 62-33-9, Calcium EDTA 63-68-3, Methionine, biological studies 63-91-2, Phenylalanine, biological studies 67-03-8, Thiamine hydrochloride 68-19-9, Cyanocobalamine 70-47-3, Asparagine, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-22-3, Tryptophan, biological studies 73-24-5, Adenine, biological studies 73-32-5, Isoleucine, biological studies 83-88-5, Riboflavin, biological studies 87-89-8, Inositol **98-92-0**, Niacinamide **113-24-6**, Sodium pyruvate 127-09-3, Sodium acetate 137-08-6, Calcium pantothenate 144-55-8, Carbonic acid monosodium salt, biological studies 147-85-3, Proline, biological studies 616-91-1, N-AcetylCysteine 645-35-2, Histidine hydrochloride 657-27-2, Lysine hydrochloride 1077-28-7, Thioctic acid 1119-34-2, Arginine hydrochloride 1344-09-8, Sodium silicate 7447-40-7, Potassium chloride, biological studies 7558-79-4, Disodium phosphate 7647-14-5, Sodium chloride, biological studies 7720-78-7, Ferrous sulfate 7733-02-0, Zinc sulfate 7757-82-6, Sodium sulfate, biological studies 7758-98-7, Copper sulfate, biological studies 7773-01-5, Manganese chloride (MnCl2) 7786-30-3, Magnesium chloride (MgCl2), biological studies 9004-61-9, Hyaluronic acid 9067-32-7, Sodium hyaluronate 10043-52-4, Calcium chloride, biological studies 11098-84-3, Ammonium molybdate 11115-67-6, Ammonium vanadate 27083-26-7, Hexamethylenebis(cyanoguanidine)-hexamethylenediamine copolymer 28757-47-3, Polyhexamethylene biguanide 32289-58-0, Polyhexanide
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(trophic composition containing amino acids and trace elements and its applications in ophthalmol.)

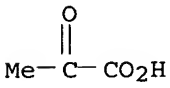
IT **98-92-0**, Niacinamide **113-24-6**, Sodium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(trophic composition containing amino acids and trace elements and its applications in ophthalmol.)

RN 98-92-0 HCAPLUS
CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)

CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

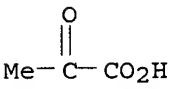
L102 ANSWER 21 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:529223 HCAPLUS
DOCUMENT NUMBER: 141:76748
TITLE: A trophic composition containing amino acids and trace elements and its applications in ophthalmology
INVENTOR(S): Thorel, Jean Noel; Gatto, Hugues
PATENT ASSIGNEE(S): Fr.
SOURCE: Fr. Demande, 26 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2849383	A1	20040702	FR 2002-16722	20021226
FR 2849383	B1	20050930		
FR 2849378	A1	20040702	FR 2003-5370	20030430
WO 2004060348	A2	20040722	WO 2003-FR3917	20031226
WO 2004060348	A3	20040923		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003303611	A1	20040729	AU 2003-303611	20031226
EP 1575558	A2	20050921	EP 2003-814501	20031226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

studies **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 328-42-7, Oxaloacetic acid 328-50-7 506-32-1, Arachidonic acid 600-18-0 631-66-3, Pyruvamide 759-05-7 1821-02-9 2392-63-4 **2922-61-4**, Lithium pyruvate 3184-35-8 3997-91-9 **4151-33-1**, Potassium pyruvate 15078-28-1, Nitroprusside 16947-06-1 **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate 33876-97-0, Sin-1 **52009-14-0**, Calcium pyruvate 67776-06-1, SNAP 68259-69-8 90088-56-5 145482-34-4, Manganese pyruvate 152102-61-9
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(treatment of pulmonary diseases in mammals by altering indigenous in vivo levels of nitric oxide)

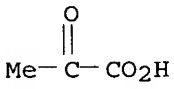
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(treatment of pulmonary diseases in mammals by altering indigenous in vivo levels of nitric oxide)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



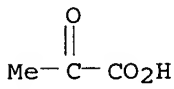
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 18983-79-4 HCAPLUS

US 2003040542	A1	20030227	US 2002-205353	20020725
US 6689810	B2	20040210		
CA 2457983	AA	20030306	CA 2002-2457983	20020815
WO 2003017996	A1	20030306	WO 2002-US26060	20020815

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1427402	A1	20040616	EP 2002-766007	20020815

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

JP 2005501106	T2	20050113	JP 2003-522516	20020815
US 2005197397	A1	20050908	US 2005-56759	20050211

PRIORITY APPLN. INFO.:

US 2002-205353	A2	20020725
WO 2002-US26060	A	20020815
US 2001-313872P	P	20010821
US 2002-205354	A2	20020725
US 2003-747963	A2	20031230

AB The present invention pertains to a method for treating a pulmonary disease state in mammals by altering indigenous in vivo levels of nitric oxide in mammalian cells. The method comprises contacting the mammalian cells with a therapeutically effective amount of a nitric oxide mediator selected from the group consisting of pyruvates, pyruvate precursors, α-keto acids having four or more carbon atoms, precursors of α-keto acids having four or more carbon atoms, and the salts thereof. The method further comprises contacting the mammalian cells with a therapeutic agent and a nitric oxide source selected from the group consisting of nitric oxide, nitric oxide precursors, and nitric oxide stimulators. In another embodiment, the method comprises treating a pulmonary disease state in mammals by protecting indigenous in vivo levels of nitric oxide in mammalian cells during ozone inhalation by contacting the mammalian cells with a therapeutically effective amount of a nitric oxide mediator.

IC ICM A61K031-19
ICS A61K031-198
INCL 514557000; 514563000
CC 1-9 (Pharmacology)

IT Antibacterial agents
Antihistamines
Antiviral agents
Cystic fibrosis
Emphysema
Fungicides
Lung, disease
Sarcoidosis
Sleep apnea
(treatment of pulmonary diseases in mammals by altering indigenous in vivo levels of nitric oxide)

IT 55-63-0, Nitroglycerin 56-40-6D, Glycine, reaction with keto-acids 56-41-7D, L-Alanine, reaction with keto-acids 56-89-3D, L-Cystine, reaction with keto-acids 58-64-0, 5'-ADP, biological studies 61-90-5D, L-Leucine, reaction with keto-acids 63-91-2D, L-Phenylalanine, reaction with keto-acids 72-18-4D, L-Valine, reaction with keto-acids 73-32-5D, L-Isoleucine, reaction with keto-acids 74-79-3, L-Arginine, biological

of strontium and determination of solubility of strontium salts. The invention also relates to the use of a strontium salt for treating a male suffering from diseases and conditions affecting metabolism and/or structural integrity of cartilage and/or bone. The invention also relates to the use of a strontium-containing compound for preventing a cartilage and/or bone condition in a subject, and for the treatment and/or prophylaxis of secondary osteoporosis.

IC ICM A61K033-24
ICS A61P019-08

CC 63-5 (Pharmaceuticals)

IT **Neoplasm**
(humoral hypercalcemia of malignancy; controlled release composition containing strontium salt)

IT Bone, **neoplasm**
(metastasis; controlled release composition containing strontium salt)

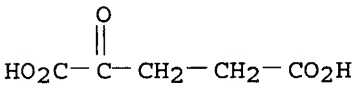
IT **Rheumatoid** arthritis
(periarticular erosion; controlled release composition containing strontium salt)

IT 56-86-0, Glutamic acid, biological studies 141-82-2, Malonic acid, biological studies **796104-83-1**
RL: **PKT (Pharmacokinetics)**; BIOL (Biological study)
(controlled release composition containing strontium salt)

IT **796104-83-1**
RL: **PKT (Pharmacokinetics)**; BIOL (Biological study)
(controlled release composition containing strontium salt)

RN 796104-83-1 HCAPLUS

CN Pentanedioic acid, 2-oxo-, strontium salt (1:1) (9CI) (CA INDEX NAME)



L102 ANSWER 20 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:934337 HCAPLUS

DOCUMENT NUMBER: 141:388710

TITLE: Method for treating pulmonary disease states in mammals by altering indigenous in vivo levels of nitric oxide

INVENTOR(S): Martin, Alain

PATENT ASSIGNEE(S): Celluar Sciences, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 205,353.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004220265	A1	20041104	US 2003-747963	20031230

TITLE: Controlled release composition containing a strontium salt and uses for treatment of bone and cartilage diseases

INVENTOR(S): Hansen, Christian; Nilsson, Henrik; Andersen, Jens E. T.

PATENT ASSIGNEE(S): Nordic Bone A/S, Den.; Osteologix A/S; Christgau, Stephan

SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004098617	A2	20041118	WO 2004-DK326	20040506
WO 2004098617	A3	20050331		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004237437	A1	20041118	AU 2004-237437	20040506
CA 2524603	AA	20041118	CA 2004-2524603	20040506
EP 1622629	A2	20060208	EP 2004-731307	20040506
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WO 2005108339	A2	20051117	WO 2005-DK307	20050505
WO 2005108339	A3	20051229		
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PRIORITY APPLN. INFO.:		
DK 2003-691	A	20030507
DK 2003-1043	A	20030708
DK 2003-1821	A	20031209
US 2003-528409P	P	20031209
WO 2004-DK326	W	20040506
WO 2004-DK327	A	20040506
WO 2004-DK328	A	20040506
DK 2004-1708	A	20041105

AB The present invention relates to a controlled release pharmaceutical composition comprising a strontium salt and uses for the therapy of bone diseases. Specifically, the invention relates to preparation of crystalline salts

Rheumatoid arthritis
(combination treatment with strontium for prophylaxis and/or treatment of cartilage and/or bone conditions)

IT Bone, **neoplasm**
(metastasis; combination treatment with strontium for prophylaxis and/or treatment of cartilage and/or bone conditions)

IT 50-14-6, Vitamin D2 56-53-1 67-97-0, Vitamin D3 67-98-1, Ethamoxytriphetol 446-72-0, Genistein 493-08-3D, Chroman, derivs. 526-26-1 553-39-9, Allenolic acid 569-57-3, Chlorotrianisene 592-89-2, Strontium formate 911-45-5, Clomiphene 1845-11-0, Nafoxidine 2188-25-2 2624-43-3, Cyclophenyl 2809-21-4 5630-53-5, Tibolone 5863-35-4, Nitromifene citrate 7440-24-6D, Strontium, salts 7446-28-8, Strontium phosphate 7783-48-4, Strontium fluoride 9002-64-6, Parathyroid hormone 10042-76-9, Strontium nitrate 10101-21-0 10476-81-0, Strontium bromide 10476-85-4, Strontium chloride 10476-86-5, Strontium iodide 10540-29-1, Tamoxifen 10596-23-3 13451-02-0, Strontium sulfite 13470-06-9, Strontium nitrite 13703-84-9, Strontium borate 16067-69-9 16088-89-4 18808-42-9 19657-12-6 23287-50-5 27540-07-4 29870-99-3 31477-60-8, Ormeloxifene 34816-55-2, Moxestrol 40302-04-3 40391-99-9 40472-00-2 58429-84-8 60884-91-5 63524-05-0 66376-36-1, Alendronate 68047-06-3, 4-Hydroxy-tamoxifen 71912-45-3 77599-17-8, Panomifene 78994-23-7, Levormeloxifene 82413-20-5, Droloxifene 84449-90-1, Raloxifene 85169-08-0 86111-26-4, Zindoxifene 89778-26-7, Toremifene 89987-06-4, Tiludronate 98007-99-9 98774-23-3, Tesmilifene 103735-76-8, erythro-MEA 105462-24-6 114084-78-5, Ibandronate 115767-74-3, TAT-59 116057-68-2 116057-75-1, Idoxifene 118072-93-8, Zoledronate 124027-29-8 128607-22-7 129453-61-8, ICI 182780 129612-87-9, Miproxifene 135459-87-9, Strontium ranelate 165536-41-4, MDL-103323 180916-16-9, Lasofoxifene 182167-03-9, EM-800 190791-29-8, CP-336156 198481-32-2, Bazedoxifene **278172-05-7** 452304-88-0 507471-56-9 796104-84-2 796104-90-0 796104-92-2 796104-97-7 796842-37-0 796842-38-1 796963-94-5
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(combination treatment with strontium for prophylaxis and/or treatment of cartilage and/or bone conditions)

IT **278172-05-7**
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(combination treatment with strontium for prophylaxis and/or treatment of cartilage and/or bone conditions)

RN 278172-05-7 HCAPLUS
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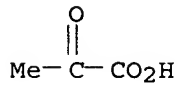


●1/2 Sr

L102 ANSWER 19 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:995988 HCAPLUS
DOCUMENT NUMBER: 141:427989

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2004237438	A1	20041118	AU 2004-237438	20040506
CA 2524610	AA	20041118	CA 2004-2524610	20040506
EP 1622630	A2	20060208	EP 2004-731315	20040506

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

WO 2005108339	A2	20051117	WO 2005-DK307	20050505
WO 2005108339	A3	20051229		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

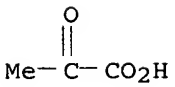
PRIORITY APPLN. INFO.:	DK 2003-691	A	20030507
	DK 2003-931	A	20030620
	DK 2003-1819	A	20031209
	US 2003-528548P	P	20031209
	WO 2004-DK326	A	20040506
	WO 2004-DK327	W	20040506
	WO 2004-DK328	A	20040506
	DK 2004-1708	A	20041105

AB A combination treatment, wherein a strontium-containing compound together with one or more active substances capable of reducing the incidence of bone fracture and/or increasing bone d. and/or improving healing of fractured bone and/or improving bone quality are administered for use in the treatment and/or prophylaxis of cartilage and/or bone conditions.

IC ICM A61K033-24
ICS A61K033-06; A61K031-592; A61K031-593; A61K031-663; A61K038-23; A61K038-29; A61K045-06; A61P019-08

CC 1-12 (Pharmacology)
Section cross-reference(s): 2, 63

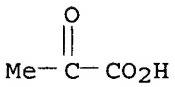
IT Antirheumatic agents
Antitumor agents
Bone, disease
Bone resorption
Bone resorption inhibitors
Cartilage
Combination chemotherapy
Drug bioavailability
Drug delivery systems
Human
Hyperparathyroidism
Myositis
Neoplasm
Osteoarthritis
Osteomalacia
Osteoporosis
Pharmacokinetics
Prophylaxis



●6 H_2O

●1/2 Sr

IT **278172-05-7**
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(water-soluble strontium salts for treatment of cartilage and/or bone disorders)
RN 278172-05-7 HCAPLUS
CN Propanoic acid, 2-oxo-, strontium salt (9CI) (CA INDEX NAME)



●1/2 Sr

L102 ANSWER 18 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:995989 HCAPLUS
DOCUMENT NUMBER: 142:747
TITLE: Combination treatment with strontium for the prophylaxis and/or treatment of cartilage and/or bone conditions
INVENTOR(S): Hansen, Christian; Nilsson, Henrik
PATENT ASSIGNEE(S): Nordic Bone A/S, Den.; Osteologix A/S; Christgau, Stephan
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004098618	A2	20041118	WO 2004-DK327	20040506
WO 2004098618	A3	20050324		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

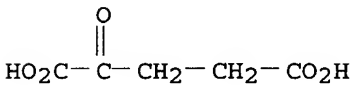
Tooth
(water-soluble strontium salts for treatment of cartilage and/or bone disorders)

IT 40472-00-2P 41839-80-9P 74078-98-1P 303730-87-2P
796104-83-1P, Strontium α-ketoglutarate 796104-86-4P
796104-88-6P **796104-89-7P** 796104-91-1P 796104-93-3P
796104-99-9P 796105-01-6P 796105-03-8P 796842-37-0P,
Strontium L-aspartate
RL: PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-soluble strontium salts for treatment of cartilage and/or bone disorders)

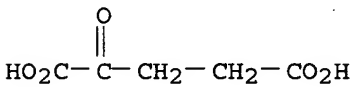
IT 868-19-9 16088-89-4 135459-87-9 183133-72-4, Strontium malonate
278172-05-7
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(water-soluble strontium salts for treatment of cartilage and/or bone disorders)

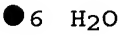
IT **796104-83-1P**, Strontium α-ketoglutarate **796104-89-7P**
796104-99-9P
RL: PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-soluble strontium salts for treatment of cartilage and/or bone disorders)

RN 796104-83-1 HCAPLUS
CN Pentanedioic acid, 2-oxo-, strontium salt (1:1) (9CI) (CA INDEX NAME)



RN 796104-89-7 HCAPLUS
CN Pentanedioic acid, 2-oxo-, strontium salt (1:1), hexahydrate (9CI) (CA INDEX NAME)





RN 796104-99-9 HCAPLUS
CN Propanoic acid, 2-oxo-, strontium salt, dodecahydrate (9CI) (CA INDEX NAME)

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

WO 2005108339 A2 20051117 WO 2005-DK307 20050505

WO 2005108339 A3 20051229

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2006122274 A1 20060608 US 2005-269289 20051107

PRIORITY APPLN. INFO.:

DK 2003-691	A	20030507
DK 2003-932	A	20030620
DK 2003-1820	A	20031209
US 2003-528442P	P	20031209
WO 2004-DK326	A	20040506
WO 2004-DK327	A	20040506
WO 2004-DK328	A	20040506
DK 2004-1708	A	20041105
WO 2005-DK140	A2	20050228
WO 2005-DK401	A2	20050617
WO 2005-DK404	A2	20050617

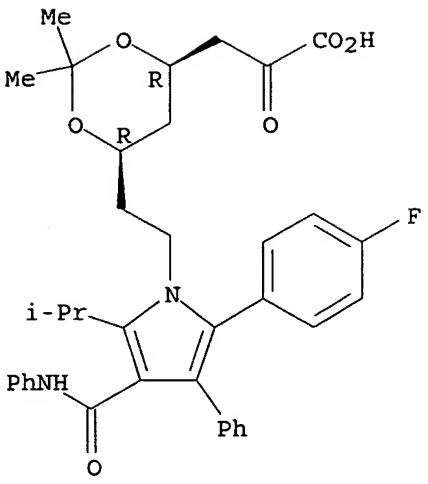
AB Compds. and pharmaceutical compns. for use in the treatment and/or prophylaxis of cartilage and/or bone conditions and for methods of treating such condition. The compds. are salts of strontium that have a water-solubility of 1-100 g/L at room temperature, especially amino acid salts of strontium or dicarboxylic acid salts of strontium. Examples of novel water-soluble strontium salts are strontium glutamate and strontium α-ketoglutarate. The present invention also relates to an improved method for preparing the strontium salt of glutamic acid. The properties and crystal structure of some of the salts were determined

IC ICM A61K033-24
ICS A61P019-08

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 23

IT Bone, **neoplasm**
(metastasis; water-soluble strontium salts for treatment of cartilage and/or bone disorders)

IT Bone, disease
Cartilage, disease
Dentifrices
Drug bioavailability
Human
Hyperparathyroidism
Mouthwashes
Myositis
Osteoarthritis
Osteomalacia
Osteoporosis
Periodontium, disease
Polymorphism (crystal)
Rheumatoid arthritis
Solubility



● Na

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 17 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:995990 HCAPLUS
DOCUMENT NUMBER: 141:428012
TITLE: Water-soluble strontium salts for treatment of cartilage and/or bone disorders
INVENTOR(S): Hansen, Christian; Nilsson, Henrik; Andersen, Jens E. T.
PATENT ASSIGNEE(S): Nordic Bone A/S, Den.; Christgau, Stephan
SOURCE: PCT Int. Appl., 93 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004098619	A2	20041118	WO 2004-DK328	20040506
WO 2004098619	A3	20050310		
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004237439	A1	20041118	AU 2004-237439	20040506
CA 2519189	AA	20041118	CA 2004-2519189	20040506
EP 1534305	A2	20050601	EP 2004-731317	20040506

Inflammation
Molecular association
Multiple sclerosis
Neoplasm
Oxidative stress, biological
Parkinson's disease
Phage display
Vision disorders
(pyrrole compds. for disease treatment by modulation of phosphodiesterase 6 subunits and binding to GTPase and quinone reductase 2 and calbindin-2)

IT **Angiogenesis**
Bone formation
(stimulation; pyrrole compds. for disease treatment by modulation of phosphodiesterase 6 subunits and binding to GTPase and quinone reductase 2 and calbindin-2)

IT Brain, disease
(**stroke**; pyrrole compds. for disease treatment by modulation of phosphodiesterase 6 subunits and binding to GTPase and quinone reductase 2 and calbindin-2)

IT 214284-48-7 351426-86-3 533883-15-7 666714-63-2 666714-64-3
666714-64-3 775356-40-6 811864-57-0 811864-58-1 811864-59-2
811864-61-6 811864-62-7 811864-63-8 811864-64-9 811864-65-0
811864-66-1 811864-67-2 811864-68-3 811864-69-4 811864-70-7
811864-71-8 811864-72-9 811864-73-0 811864-74-1 811864-75-2
811864-76-3 811864-77-4 811864-78-5 811864-79-6 811864-81-0
811864-83-2 811864-85-4 811864-87-6 811864-88-7 811864-89-8
811864-90-1 811864-91-2 811864-92-3 811864-93-4
811864-94-5 811864-95-6 811864-96-7
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyrrole compds. for disease treatment by modulation of phosphodiesterase 6 subunits and binding to GTPase and quinone reductase 2 and calbindin-2)

IT **811864-90-1**
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyrrole compds. for disease treatment by modulation of phosphodiesterase 6 subunits and binding to GTPase and quinone reductase 2 and calbindin-2)

RN 811864-90-1 HCAPLUS
CN 1,3-Dioxane-4-propanoic acid, 6-[2-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]ethyl]-2,2-dimethyl-α-oxo-, monosodium salt, (4R,6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110998	A1	20041223	WO 2004-US15444	20040517
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004242673	A1	20041202	US 2004-847897	20040517
US 2004248972	A1	20041209	US 2004-848515	20040517
US 2004248957	A1	20041209	US 2004-848521	20040517
AU 2004247627	A1	20041223	AU 2004-247627	20040517
CA 2523808	AA	20041223	CA 2004-2523808	20040517
EP 1636183	A1	20060322	EP 2004-752457	20040517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				

PRIORITY APPLN. INFO.:	US 2003-471425P	P	20030516
	US 2003-480289P	P	20030620
	US 2003-480475P	P	20030620
	US 2003-488172P	P	20030716
	US 2003-488178P	P	20030716
	US 2003-516610P	P	20031030
	US 2003-516616P	P	20031030
	US 2003-516651P	P	20031030
	WO 2004-US15444	W	20040517

OTHER SOURCE(S): MARPAT 142:69218

AB The invention provides pyrrole-containing compds. and methods of use thereof. Kits and pharmaceutical compns. comprising the pyrrole compds. of the invention are also provided. The compds. and compns. disclosed herein are preferably used in the treatment of neurodegenerative diseases, cardiovascular diseases, proliferative diseases, and visual disorders. In particular, methods and compns. for the treatment of stroke are disclosed herein. The compds. described herein are useful in the treatment of various diseases; in particular diseases in which modulation of phosphodiesterase 6, quinone reductase 2, and/or calbindin-2 is desired.

IC ICM C07D207-36
ICS A61K031-40

CC 1-12 (Pharmacology)

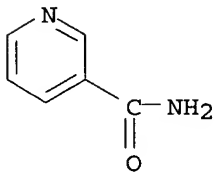
IT Nerve, disease
(peripheral, **diabetic** neuropathy; pyrrole compds. for disease treatment by modulation of phosphodiesterase 6 subunits and binding to GTPase and quinone reductase 2 and calbindin-2)

IT **Alzheimer**'s disease
Anti-**Alzheimer**'s agents
Anti-inflammatory agents
Antiparkinsonian agents
Antitumor agents
Cardiovascular agents
Cardiovascular system, disease
Cytoprotective agents
Drug screening
Human
Immunostimulants
Immunostimulation

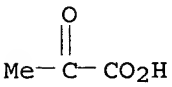
11098-84-3, Ammonium molybdate 12001-79-5, Vitamin K 15595-35-4, L-Arginine.hydrochloride 22177-51-1, Adenine.hydrochloride 25265-75-2, Butylene glycol 34760-60-6 36653-82-4, Cetyl alcohol 52993-54-1, Menthane 61912-98-9, Insulin-like growth factor 62031-54-3, Fibroblast growth factor 62229-50-9, Epidermal growth factor 83869-56-1, Granulocyte macrophage colony stimulating factor 106096-92-8, Acidic FGF 117147-70-3, Amphiregulin 127464-60-2, Vascular endothelial growth factor 143011-72-7, Granulocyte colony stimulating factor 148348-15-6, Fibroblast growth factor 7
RL: COS (Cosmetic use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(skin rejuvenation and repair compns. containing cell growth rate enhancers and cell protectants and penetration enhancers)

IT **98-92-0**, Niacinamide **113-24-6**, Sodium pyruvate
RL: COS (Cosmetic use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(skin rejuvenation and repair compns. containing cell growth rate enhancers and cell protectants and penetration enhancers)

RN 98-92-0 HCAPLUS
CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

L102 ANSWER 16 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1127333 HCAPLUS
DOCUMENT NUMBER: 142:69218
TITLE: Pyrrole compounds and uses thereof
INVENTOR(S): Lockhart, David J.; Patel, Hitesh K.; Milanov, Zdravko V.; Mehta, Shamal Anil; Zarrinkar, Patrick Parvis; Biggs, William H., III; Ciceri, Pietro; Fabian, Miles A.; Treiber, Daniel Kelly
PATENT ASSIGNEE(S): Ambit Biosciences Corporation, USA
SOURCE: PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

Prostaglandins
Proteins
Proteoglycans, biological studies
Salts, biological studies
Tenascins
Terpenes, biological studies
Thiols, biological studies
Thrombospondins
Trace metals
Transferrins
Vitamins
Vitronectin
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(skin rejuvenation and repair compns. containing cell growth rate enhancers and cell protectants and penetration enhancers)

IT 50-81-7, Ascorbic acid, biological studies 52-89-1, L-Cysteine hydrochloride 52-90-4, Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic Acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic Acid, biological studies 57-55-6, Propylene glycol, biological studies 57-88-5, Cholesterol, biological studies 58-56-0, Pyridoxine.hydrochloride 58-85-5, D-Biotin 59-30-3, Folic Acid, biological studies 60-18-4, L-Tyrosine, biological studies 60-33-3, Linoleic acid, biological studies 61-90-5, L-Leucine, biological studies 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 64-17-5, Ethanol, biological studies 65-22-5, Pyridoxal.hydrochloride 67-03-8, Thiamine.hydrochloride 67-48-1, Choline Chloride 67-56-1, Methanol, biological studies 67-63-0, Isopropanol, biological studies 68-19-9, Vitamin B12 68-94-0, Hypoxanthine 70-18-8, Glutathione, biological studies 70-47-3, L-Asparagine, biological studies 71-23-8, Propanol, biological studies 72-18-4, L-Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 73-32-5, L-Isoleucine, biological studies 76-22-2, Camphor 79-83-4, D-Pantothenic Acid 83-88-5, Riboflavin, biological studies 87-89-8, MyoInositol **98-92-0**, Niacinamide 110-60-1, Putrescine 111-87-5, Octyl alcohol, biological studies 112-30-1, Decyl alcohol 112-53-8, Lauryl alcohol 112-80-1, Oleic acid, biological studies 112-92-5, Stearyl alcohol **113-24-6**, Sodium pyruvate 127-09-3, Sodium acetate 134-03-2, Sodium ascorbate 137-08-6, Calcium D-pantothenate 143-28-2, Oleyl alcohol 144-55-8, Sodium bicarbonate, biological studies 147-85-3, L-Proline, biological studies 151-21-3, Sodium dodecylsulfate, biological studies 289-95-2D, Pyrimidine, derivs. 302-79-4, Tretinoin 303-98-0, Coenzyme Q 10 1007-42-7, L-Histidine.hydrochloride 1200-22-2, Lipoic acid 1344-09-8, Sodium silicate 1406-18-4, Vitamin E 7235-40-7, β-Carotene 7365-45-9, HEPES 7447-40-7, Potassium chloride, biological studies 7558-79-4, Dibasic sodium phosphate 7558-80-7, Sodium phosphate monobasic 7647-14-5, Sodium chloride, biological studies 7718-54-9, Nickel chloride, biological studies 7720-78-7, Ferrous sulfate 7733-02-0, Zinc sulfate 7758-11-4, Potassium phosphate dibasic 7758-98-7, Copper sulfate, biological studies 7772-99-8, Tin chloride, biological studies 7778-77-0, Potassium phosphate monobasic 7782-49-2, Selenium, biological studies 7785-87-7, Manganese sulfate 9002-72-6, Somatotropin 9004-10-8, Insulin, biological studies 9004-61-9, Hyaluronic acid 9005-65-6, Polysorbate 80 9041-08-1, Heparin-Sodium 9067-32-7, Sodium hyaluronate 10098-89-2, L-Lysine.hydrochloride 10102-18-8, Sodium selenite 10421-48-4, Ferric nitrate 11096-26-7, Erythropoietin

US 2001-313313P	P	20010818
US 2001-313314P	P	20010818
US 2002-222949	A2	20020816
US 2001-313306	A2	20010818
US 2001-313307	A2	20010818
US 2001-313313	A2	20010818
US 2001-313314	A2	20010818

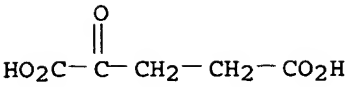
AB The present invention provides compns. for the repair of mammalian skin. The compns. contain cell growth enhancers to increase the growth rate of skin cells, stimulators of cell growth enhancers, nutrients to support log phase growth of skin cells, cell protectors to protect growing cells and enhanced cellular activity, antioxidants to protect rejuvenated cells, extracellular matrix proteins, stimulators of extracellular matrix proteins, and penetration enhancers. The compns. of the present invention are effective for repairing and rejuvenating mammalian skin, such that aging skin treated with the compns. has a significant reduction in the number of fine lines and wrinkles in the skin. The compns. are also effective for promoting the healing of skin that has suffered a wound, such as a sunburn or abrasion, and for promoting the growth of hair on the scalp.

IC ICM A61K038-19
ICS A61K031-728

INCL 424085100; 514474000; 435404000; 514054000

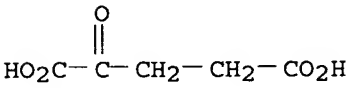
CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 63

IT Alcohols, biological studies
Angiogenic factors
Antibodies and Immunoglobulins
Cadherins
Carbohydrates, biological studies
Castor oil
Cell adhesion molecules
Cocoa butter
Coconut oil
Collagens, biological studies
Cytokines
Disaccharides
Elastins
Fatty acids, biological studies
Fibroin
Fibronectins
Glycerides, biological studies
Glycols, biological studies
Growth factors, animal
Hemopoietins
Integrins
Keratins
Laminins
Linseed oil
Lipids, biological studies
Lipoproteins
Minerals, biological studies
Monosaccharides
Nucleosides, biological studies
Paraffin oils
Peptides, biological studies
Peptones
Phospholipids, biological studies
Platelet-derived growth factors
Polysaccharides, biological studies



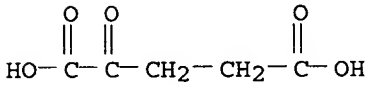
● Na

RN 71686-01-6 HCAPLUS
CN Pentanedioic acid, 2-oxo-, calcium salt (1:1) (9CI) (CA INDEX NAME)



● Ca

RN 86248-59-1 HCAPLUS
CN Pentanedioic acid, 2-oxo-, calcium salt (2:1) (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 15 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:983 HCAPLUS
DOCUMENT NUMBER: 142:79607
TITLE: Compositions and methods for skin rejuvenation and repair
INVENTOR(S): Jain, Deepak
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 18 pp., Cont.-in-part of U.S. Ser. No. 222,949.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004265268	A1	20041230	US 2004-821427		20040409
US 2003068297	A1	20030410	US 2002-222949		20020816
PRIORITY APPLN. INFO.:			US 2001-313306P	P	20010818
			US 2001-313307P	P	20010818

WO 2005002567	A1	20050113	WO 2004-SE1062	20040701
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004254154	A1	20050113	AU 2004-254154	20040701
CA 2530863	AA	20050113	CA 2004-2530863	20040701
EP 1638546	A1	20060329	EP 2004-749100	20040701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004012118	A	20060815	BR 2004-12118	20040701
CN 1822827	A	20060823	CN 2004-80020322	20040701
PRIORITY APPLN. INFO.:			SE 2003-1947 A	20030701
			US 2003-481301P P	20030828
			WO 2004-SE1062 W	20040701

AB A method is disclosed for improving adsorption of amino acids in vertebrates, including mammals and birds. The method comprises administering α-ketoglutaric acid (AKG), AKG derivs. or metabolites, AKG analogs or mixts. thereof, in a sufficient amount and/or at a sufficient rate to enable the desired effect. Also disclosed is a method for decreasing adsorption of glucose in vertebrates, including mammals and birds, using AKG, AKG derivs. or metabolites, AKG analogs or mixts. thereof, for decreasing glucose adsorption. Further disclosed are compns. for use in treatment.

IC ICM A61K031-198
ICS A23L001-305

CC 1-10 (Pharmacology)
Section cross-reference(s): 18, 63

IT Autoimmune disease
(insulin-dependent **diabetes** mellitus; α-ketoglutaric acid for treatment of malnutrition and high plasma glucose)

IT **Diabetes** mellitus
(insulin-dependent; α-ketoglutaric acid for treatment of malnutrition and high plasma glucose)

IT **Diabetes** mellitus
(non-insulin-dependent; α-ketoglutaric acid for treatment of malnutrition and high plasma glucose)

IT 70-26-8, L-Ornithine 328-50-7D, α-Ketoglutaric acid, derivs. and salts 9012-76-4, Chitosan **22202-68-2 71686-01-6 86248-59-1**
RL: AGR (Agricultural use); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(α-ketoglutaric acid for treatment of malnutrition and high plasma glucose)

IT **22202-68-2 71686-01-6 86248-59-1**
RL: AGR (Agricultural use); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(α-ketoglutaric acid for treatment of malnutrition and high plasma glucose)

RN 22202-68-2 HCAPLUS

CN Pentanedioic acid, 2-oxo-, monosodium salt (9CI) (CA INDEX NAME)

migration and cGMP accumulation. In conclusion, superoxide and hydrogen peroxide seem to play a significant role in promoting endothelial cell proliferation and migration, possibly through regulation of eNOS activity.

CC 1-8 (Pharmacology)
Section cross-reference(s): 7

ST antioxidant endothelium eNOS downregulation superoxide **angiogenesis**

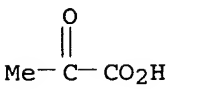
IT **Angiogenesis** inhibitors
Antioxidants
Human
Radical scavengers
(antioxidants inhibit human endothelial cell functions through down-regulation of eNOS activity)

IT **Phosphorylation**, biological
(protein; antioxidants inhibit human endothelial cell functions through down-regulation of eNOS activity)

IT 50-02-2, Dexamethasone **113-24-6**, Sodium pyruvate 315-30-0, Allopurinol 498-02-2, Apocynin 2226-96-2, Tempol 7722-84-1, Hydrogen peroxide, biological studies 9001-05-2, Catalase 9054-89-1, Superoxide dismutase 34284-75-8, 4-(2-Aminoethyl)-benzenesulfonyl fluoride 41443-28-1 50903-99-6, L-NAME 141968-19-6 159190-44-0 180001-34-7, 1400W 214358-33-5
RL: **PAC (Pharmacological activity)**; BIOL (Biological study)
(antioxidants inhibit human endothelial cell functions through down-regulation of eNOS activity)

IT **113-24-6**, Sodium pyruvate
RL: **PAC (Pharmacological activity)**; BIOL (Biological study)
(antioxidants inhibit human endothelial cell functions through down-regulation of eNOS activity)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

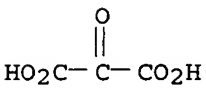
L102 ANSWER 14 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:29193 HCAPLUS
DOCUMENT NUMBER: 142:107416
TITLE: Use of α-ketoglutaric acid for the treatment of malnutrition or high plasma glucose condition
INVENTOR(S): Pierzynowski, Stefan G.; Burrin, Douglas
PATENT ASSIGNEE(S): Essentys AB, Swed.
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

(atom, atom-type, and total nonstochastic and stochastic quadratic fingerprints as promising approach for modeling antibacterial activity)

IT **21085-60-9**, Calcium mesoxalate
RL: **PAC (Pharmacological activity)**; PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(atom, atom-type, and total nonstochastic and stochastic quadratic fingerprints as promising approach for modeling antibacterial activity)

RN 21085-60-9 HCAPLUS
CN Propanedioic acid, oxo-, calcium salt (1:1) (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 91 THERE ARE 91 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 13 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:184694 HCAPLUS
DOCUMENT NUMBER: 142:403842
TITLE: Antioxidants inhibit human endothelial cell functions through down-regulation of endothelial nitric oxide synthase activity
AUTHOR(S): Polytarchou, Christos; Papadimitriou, Evangelia
CORPORATE SOURCE: Laboratory of Molecular Pharmacology, Department of Pharmacy, University of Patras, GR 26504, Greece
SOURCE: European Journal of Pharmacology (2005), 510(1-2), 31-38
CODEN: EJPHAZ; ISSN: 0014-2999
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have recently shown that superoxide and hydrogen peroxide are putative inducers of angiogenesis in vivo, possibly through up regulation of inducible nitric oxide synthase (NOS) and increased production of endogenous nitric oxide (NO). The aim of the present work was to elucidate the implication of reactive oxygen species in endothelial cell functions, using cultures of human umbilical vein endothelial cells (HUVEC). Superoxide dismutase (SOD), tempol (membrane permeable SOD mimetic) and the NADPH oxidase inhibitors, 4-(2-aminoethyl)-benzenesulfonyl fluoride and apocynin, but not allopurinol, inhibited HUVEC proliferation and migration, as well as activity of endothelial NOS (eNOS). Catalase and the intracellular hydrogen peroxide scavenger sodium pyruvate decreased, while hydrogen peroxide increased HUVEC proliferation, migration and activity of eNOS. Dexamethasone induced the proliferation and migration of HUVEC and activated eNOS. Nω-nitro-L-arginine Me ester (L-NAME), but not Nω-nitro-D-arginine Me ester, decreased endothelial cell functions and reversed the effects of dexamethasone and hydrogen peroxide. N 5-(1-iminoethyl)-L-ornithine dihydrochloride, but not the inducible NOS specific inhibitor N-[[3-(aminomethyl)phenyl]methyl]-ethanimidamide dihydrochloride also decreased endothelial cell functions, similarly to L-NAME. The guanylate cyclase inhibitor 1H-[1,2,4]Oxadiazole[4,3-a]quinoxalin-1-one inhibited HUVEC proliferation in a concentration-dependent manner and completely reversed hydrogen peroxide-induced proliferation,

Bromchlorophene 15500-66-0, Pancuronium bromide 15574-96-6, Pizotifen 15585-71-4, Brometenamine 15590-00-8, Etamocycline 15599-51-6, Apicycline 15599-52-7, Broquinaldol 15686-71-2, Cefalexin 15687-37-3, Naftazone 15825-70-4, Nitromannitol 15876-67-2, Distigmine bromide 15949-72-1, Prazocillin 15997-76-9, Nonaperone 16029-28-0, Binoxol 16051-77-7, Isosorbide mononitrate 16255-48-4, Chloramphenicol stearate 16259-34-0, Penimocycline 16462-67-2, Plicatin 16590-41-3, Naltrexone 16755-07-0, Showdomycin 16806-29-4, Sulfathiadiazole 16822-88-1, Flutonidine hydrochloride 16846-24-5, Josamycin 16915-79-0, Mequidox 17090-79-8, Monensin 17169-60-7, Ferroglycine sulfate 17196-88-2, Vincofos 17243-38-8, Azidocillin 17243-56-0, Visnafylline, biological studies 17287-03-5, Trimethylsulfonium hydroxide 17289-49-5, 4,5,6,7-Tetrahydro-2-methyl-3-(methylamino)-2H-indazole 17311-31-8, Dioxidine 17411-19-7, Dicarbine 17433-31-7, Azapicyl 17505-25-8, Furamizole 17554-97-1, Rifamycin 10 17615-73-5, Sulfamoyldapsone 17630-39-6 17630-44-3, Alcabrol 17650-86-1, Amicetin 17692-22-7, Metizoline 17773-10-3 17784-12-2, Sulfacitine 17892-25-0 17902-23-7, Tegafur 17924-92-4, Zearalenone 18174-58-8, Pipoxolan hydrochloride 18323-44-9, Clindamycin 18329-77-6, SOG-18 18524-67-9, Mycobacillin 18607-98-2, Acetylsulfisomezole 18715-92-9, Epihetacillin 18857-59-5, Nifurmazole 18883-66-4, Streptozotocin 19077-97-5, Sulgin ASG 19246-24-3, Telomycin 19260-97-0 19388-87-5, Taurolidine 19561-70-7, Nifuratrone 19562-30-2, Piromidic acid 19703-86-7, LU 2443 19721-56-3, Pikromycin 19879-06-2, Granaticin 20167-22-0, Ag 307 20186-12-3 20406-60-4, Mipimazole 20537-88-6, Amifostine 20585-97-1, Everninocin 20619-89-0, Polyurene 20724-76-9, WR 2823 **21085-60-9**, Calcium mesoxalate 21256-23-5, Mebenformin 21299-86-5, PHQA 33 21306-55-8, Amformin 21345-23-3 21356-62-7, Esperin 21411-53-0, Virginiamycin M1 21416-67-1, Razoxane 21440-97-1, Brofoxine 21512-15-2, Citenazone 21590-92-1, Etomidoline 21638-36-8, Nifurimide 21649-57-0, Carfecillin sodium 21662-79-3, Sulfacecole 21702-93-2, Cloguanamil 21802-37-9, Caerulomycin 21831-01-6, Mebroxine furoate 21840-08-4, Melarsenoxyd 21879-81-2, Bostrycin 21884-44-6, Luteoskyrin 22013-23-6, Metoxepin 22103-14-6, Bufeniode 22232-54-8, Carbimazole 22232-57-1, Racefemine 22232-73-1, Amedalin hydrochloride 22259-30-9, Formetanate 22332-07-6, Hybrimycin A1 22350-90-9, Dactylarin 22484-64-6 22561-27-9, Cephachlomezine 22587-15-1, MSD-819 22609-73-0, Niludipine 22775-12-8, Dimetofrine hydrochloride 22839-47-0, Aspartame 22862-76-6, Anisomycin 22933-72-8, Salazodine 23152-29-6, Virginiamycin S1 23155-02-4, Fosfomycin 23210-58-4, Ifenprodil tartrate 23239-36-3, Deterenol hydrochloride 23239-41-0, Cefacetrile sodium 23239-78-3, Pridefine hydrochloride 23247-36-1, Nafomine malate 23256-09-9, Closiramine aceturate 23256-23-7, Sulfatroxazole 23256-39-5, Tyformin hydrochloride 23307-72-4 23315-05-1, Elaiomycin 23319-48-4 23384-69-2 23413-66-3, DS-30 23444-86-2, Suncillin sodium 23465-76-1, Caroverine 23537-16-8, Rugulosin 23567-67-1, Abbott-31699 23593-08-0, Clonazoline hydrochloride 23668-90-8, Thiazanol 23696-28-8, Olaquindox 23780-36-1, Methindione 23943-03-5 24168-96-5, Isoconazole nitrate 24209-51-6, Cephanone 24292-47-5, Chloramphenicol Stearoylglycolate 24353-88-6, Lorbamate 24356-60-3, Cefapirin sodium 24397-89-5, Actinobolin 24466-64-6, Bismuth Cevitamate 24535-67-9, Anisyl butamide 24579-08-6 24632-47-1, Nifurpipone 24701-51-7, Demexiptiline 24729-96-2, Clindamycin phosphate 24916-50-5, Foromacidin A 24916-52-7, Spiramycin 3 25029-11-2, Cetovex 25129-81-1 25129-91-3, Albocycline 25238-82-8, Hexatolin 25389-94-0, Kanamycin sulfate 25395-22-6, O-Carbamoylphenoxyacetic acid

RL: **PAC (Pharmacological activity)**; PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

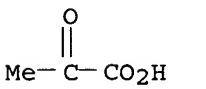
AB The Topol. Mol. Computer Design (TOMOCOMD-CARDD) approach has been introduced for the classification and design of antimicrobial agents using computer-aided mol. design. For this propose, atom, atom-type, and total quadratic indexes have been generalized to codify chemical structure information. In this sense, stochastic quadratic indexes have been introduced for the description of the mol. structure. These stochastic fingerprints are based on a simple model for the intramol. movement of all valence-bond electrons. In this work, a complete data set containing 1006 antimicrobial agents is collected and presented. Two structure-based antibacterial activity classification models have been generated. The models (including nonstochastic and stochastic indexes) classify correctly more than 90% of 1525 compds. in training sets. These models permit the correct classification of 92.28% and 89.31% of 505 compds. in an external test sets. The approach, also, satisfactorily compares with respect to nine of the most useful models for antimicrobial selection reported to date. Finally, a virtual screening of 87 new compds. reported in the anti-infective field with antibacterial activities is developed showing the ability of the models to identify new leads as antibacterial.

CC 1-3 (Pharmacology)
Section cross-reference(s): 2

IT Structure-activity relationship
(**bactericidal**; atom, atom-type, and total nonstochastic and stochastic quadratic fingerprints as promising approach for modeling antibacterial activity)

IT 10118-90-8, Minocycline 10161-33-8, Trenbolone 10173-02-1 10183-64-9, Decinin 10250-82-5, Bromocholine 10309-37-2, Drupanol 10329-60-9, Dioxifedrine 10382-35-1, Triostin C 10433-71-3, Tiametonium iodide 10447-38-8 10457-66-6, Geroquinol 10489-23-3, Tioctilate 10539-19-2, Moxaverine 10571-59-2, Nicoclonate 10572-34-6, Cicliomenol 10593-85-8, Homocysteine thiolactone 10605-24-0, Nitral 11005-98-4, Antibiotic A-16316-C 11011-72-6, Bluensomycin 11013-76-6, Gramicidin J2 11015-47-7, Neotelomycin 11033-34-4, Steffimycin 11048-15-0, Kalafungin 11054-70-9, Lasalocid 11076-50-9, Tetramycin 11111-23-2, Lividomycin 11118-72-2, Antimycin 12040-46-9, Azoseptyl-T 12286-76-9, Ferric fructose 12318-51-3, Feramide 12628-08-9, Arsylene 12650-69-0, Mupirocin 12704-90-4, Antibiotic X-5108 12764-54-4, Oleficin 12772-35-9, Butirosin 13010-46-3 13010-48-5, Malazin 13040-98-7, Guamecycline hydrochloride 13052-92-1, Anaesthaminol 13058-67-8, Lucimycin 13061-27-3 13062-59-4, Solution A 40 13153-65-6, Nitrodimethylin 13185-22-3, Furazonal 13254-33-6, Carpronium chloride 13278-80-3, Bis(ethylmercury)sulfide 13292-46-1, Rifampicin 13369-07-8, Sulfatrozole 13402-51-2, Tibenzate 13410-72-5, Nitrofen 13411-16-0, Nifurpirinol 13434-13-4, Actinonin 13448-22-1, Clorotepine 13532-12-2, Azoseptyl-K 13583-21-6, Norclostebol 13636-18-5, Fendiline hydrochloride 13754-56-8, 9,9-Dioxopromethazine 13838-08-9, Azidamfenicol 13838-16-9, Enflurane 13838-18-1, Protozide 13925-12-7, Myxin 13930-34-2, Clormecaine 13957-33-0, Leptodactyline 14008-60-7, Cresotamide 14014-70-1, Doricin 14042-43-4 14088-71-2, Proclonol 14149-43-0, Trimethidinium methosulfate 14176-50-2, Tiletamine hydrochloride 14286-84-1, Bencyclane fumarate 14289-25-9, Diproleandomycin 14376-16-0, Sulfaloxic acid 14399-14-5, Chloramphenicol cinnamate 14838-15-4, Norephedrine 14885-29-1, Ipronidazole 14949-00-9, Tio-Urasin 15062-34-7, Bromothymol 15125-97-0 15301-48-1 15301-80-1, Oxamarin 15301-82-3, Pecocycline 15301-97-0, Xylocoumarol 15318-45-3, Thiamphenicol 15339-50-1, Ferrotrenine 15433-28-0, Clometocillin potassium 15435-29-7,

composition suitable for enteral administration containing: 2-20 weight% digestible
dissolved carbohydrates; two or more glutathione promoters selected from: 0.5-50 g/L pyruvate equivalent; 0.05-20 g/L oxaloacetate equivalent; and 0.05-5 g/L cysteine equivalent; and at least 45 weight% water.
IC ICM A61K031-70
ICS A61K031-7004; A61K031-7016; A61K031-715; A61K038-06; A23L001-30; A23L001-305; A61P011-00
CC 63-6 (Pharmaceuticals)
IT **Bacteremia**
(carbohydrate composition for treating or preventing pulmonary inflammation or acute respiratory distress syndrome)
IT Infection
(**viral**; carbohydrate composition for treating or preventing pulmonary inflammation or acute respiratory distress syndrome)
IT 50-99-7, Glucose, biological studies 57-48-7, Fructose, biological studies 69-79-4, Maltose 77-92-9, Citric acid, biological studies 127-17-3, Pyruvic acid, biological studies 328-42-7, Oxaloacetic acid 616-91-1, N-Acetylcysteine 1200-22-2, α Lipoic acid 9004-53-9D, Dextrins, derivs. 9004-54-0, Dextran, biological studies 9005-25-8D, Starch, derivs. 9050-36-6D, Maltodextrin, derivs. **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(carbohydrate composition for treating or preventing pulmonary inflammation or acute respiratory distress syndrome)
IT **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(carbohydrate composition for treating or preventing pulmonary inflammation or acute respiratory distress syndrome)
RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



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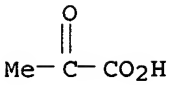
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 12 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:244333 HCAPLUS
DOCUMENT NUMBER: 143:307
TITLE: Atom, atom-type, and total nonstochastic and stochastic quadratic fingerprints: a promising approach for modeling of antibacterial activity
AUTHOR(S): Marrero-Ponce, Yovani; Medina-Marrero, Ricardo; Torrens, Francisco; Martinez, Yamile; Romero-Zaldivar, Vicente; Castro, Eduardo A.
CORPORATE SOURCE: Department of Pharmacy, Faculty of Chemical-Pharmacy, Central University of Las Villas, Santa Clara, 54830, Cuba
SOURCE: Bioorganic & Medicinal Chemistry (2005), 13(8), 2881-2899
CODEN: BMECEP; ISSN: 0968-0896



●1/2 Ca

L102 ANSWER 11 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:283344 HCAPLUS
DOCUMENT NUMBER: 142:322797
TITLE: Carbohydrate composition and its use for the preparation of a medicament for treating or preventing pulmonary inflammation or acute respiratory distress syndrome
INVENTOR(S): Van Norren, Klaske; Van Hoorn, Eduard Christian; Hageman, Robert Johan Joseph; Lamb, Kelly Jane
PATENT ASSIGNEE(S): N.V. Nutricia, Neth.
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

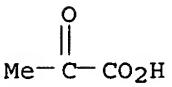
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005027935	A1	20050331	WO 2004-NL649	20040920
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004273758	A1	20050331	AU 2004-273758	20040920
CA 2539364	AA	20050331	CA 2004-2539364	20040920
EP 1663256	A1	20060607	EP 2004-774952	20040920
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				

PRIORITY APPLN. INFO.: EP 2003-77972 A 20030919
WO 2004-NL649 W 20040920

AB One aspect of the present invention is concerned with a method of treating or preventing pulmonary inflammation as a complication ensuing from phys. trauma, bacteremia or viral infection, said method comprising enterally administering at least one or more glutathione promoters selected from: 0.3-20 g, preferably 0.5-5 g pyruvate equivalent; 0.1-5 g, preferably 0.2-2 g oxaloacetate equivalent; 0.01-1 g, preferably 0.02-0.5 g lipoic acid equivalent;
and at least 20 g of digestible water soluble carbohydrates, in the form of an aqueous liquid composition containing at least 10 g/L of said digestible water soluble
carbohydrates. Another aspect of the invention relates to an aqueous liquid

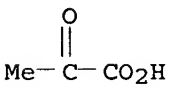
use); BIOL (Biological study); USES (Uses)
(pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



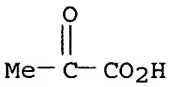
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



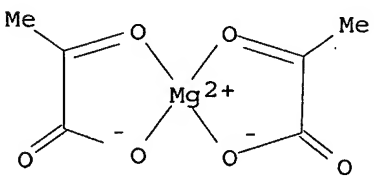
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

Cardiovascular system, disease
Combination chemotherapy
Diabetes mellitus
Digestive tract, disease
Drug delivery systems
Erythema
Fungicides
Gastrointestinal agents
Human
Human immunodeficiency virus
Inflammation
Ischemia
Leukocyte
Multiple sclerosis
Neoplasm
Nervous system, disease
Nervous system agents
Pain
Parkinson's disease
Psoriasis
Rheumatoid arthritis
Skin, disease
Sunburn
Swelling, biological
Transplant and Transplantation
Wound
Wound healing promoters
(pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

IT Brain, disease
(**stroke**; pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

IT Infection
(**viral**; pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

IT 56-40-6D, Glycine, α-keto acid conjugates 56-41-7D, L-Alanine, α-keto acid conjugates 61-90-5D, L-Leucine, α-keto acid conjugates 63-91-2D, L-Phenylalanine, α-keto acid conjugates 72-18-4D, L-Valine, α-keto acid conjugates 73-32-5D, L-Isoleucine, α-keto acid conjugates **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 127-17-3D, aluminum complexes 127-17-3D, Pyruvic acid, derivs. and salts 328-42-7, Oxaloacetic acid 328-50-7, α-keto-Glutaric acid 600-18-0 631-66-3, Pyruvamide 759-05-7, α-keto-Isovaleric acid 923-32-0D, Cystine, -keto acid conjugates 2392-63-4 2492-75-3 **2922-61-4**, Lithium pyruvate 3184-35-8 3997-91-9 **4151-33-1**, Potassium pyruvate 16947-06-1 17686-94-1, Ammonium pyruvate **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 90088-56-5 145482-34-4, Manganese pyruvate 152102-61-9 863879-42-9
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic**

CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:
US 2002-205354 A2 20020725
US 2003-747963 A2 20031230
US 2001-313871P P 20010821
US 2002-205353 A2 20020725
WO 2002-US26060 A 20020815
US 2005-56759 A 20050211

AB The invention provides a method for treating wounds and diseases in mammals, caused by mammalian cells involved in an inflammatory response, by altering indigenous in vivo levels of peroxynitrous acid, and salts thereof. The method comprises contacting the mammalian cells with a therapeutically effective amount of a reactive oxygen species mediator, wherein the reactive oxygen species mediator is selected from the group consisting of pyruvates, pyruvate precursors, α-keto acids having four or more carbon atoms, precursors of α-keto acids having four or more carbon atoms, and the salts thereof, wherein mediation of reactive oxygen species results in mediation of peroxynitrous acid. The invention further provides a pharmaceutical composition for treating wounds and diseases in mammals, caused by mammalian cells involved in an inflammatory response, by altering indigenous in vivo levels of peroxynitrous acid, and salts thereof.

IC ICM A61K031-19
INCL 514557000
CC 1-7 (Pharmacology)
Section cross-reference(s): 63

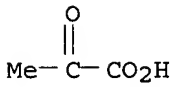
IT Infection
(**bacterial**; pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

IT Ulcer
(**diabetic**; pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

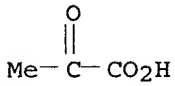
IT **Fungi**
(infection; pyruvates and α-keto acids for treating mammalian diseases and injuries caused by overexpression of peroxynitrite)

IT **AIDS** (disease)
Alzheimer's disease
Analgesics
Angiogenesis
Angiogenesis inhibitors
Anti-**AIDS** agents
Anti-**Alzheimer**'s agents
Anti-inflammatory agents
Anti-ischemic agents
Antiarthritics
Antibacterial agents
Antidiabetic agents
Antihistamines
Antioxidants
Antiparkinsonian agents
Antirheumatic agents
Antitumor agents
Antiulcer agents
Antiviral agents
Arthritis
Atherosclerosis
Cardiovascular agents

use); BIOL (Biological study); USES (Uses)
(application of blood volume expander in treating hemorrhagic shock)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

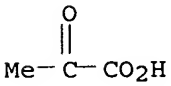


L102 ANSWER 10 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:985327 HCAPLUS
DOCUMENT NUMBER: 143:260368
TITLE: Method and composition using pyruvates and α-keto acids for treating mammalian diseases and injuries caused by the overexpression of peroxynitrite
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 24 pp., Cont.-in-part of U.S. Ser. No. 747,963.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005197397	A1	20050908	US 2005-56759	20050211
US 2003105162	A1	20030605	US 2002-205354	20020725
US 2004220265	A1	20041104	US 2003-747963	20031230
WO 2006086643	A1	20060817	WO 2006-US4753	20060210

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,

combination of strontium-containing compound and second active substance)
IT 278172-05-7
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method of improving medical treatment of pain by administering combination of strontium-containing compound and second active substance)
RN 278172-05-7 HCAPLUS
CN Propanoic acid, 2-oxo-, strontium salt (9CI) (CA INDEX NAME)



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L102 ANSWER 9 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1066831 HCAPLUS
DOCUMENT NUMBER: 143:410972
TITLE: Application of blood volume expander in treating hemorrhagic shock
INVENTOR(S): Wang, Ziling; Zhou, Hong; Zhao, Lian; Guan, Lidong; Wang, Guangyi
PATENT ASSIGNEE(S): Institute of Field Transfusion, Academy of Military Medical Sciences, Pla, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1559391	A	20050105	CN 2004-10008486	20040312
PRIORITY APPLN. INFO.:			CN 2004-10008486	20040312

AB The title blood volume expander contains 0.15-2.7mol/l sodium pyruvate or calcium pyruvate as protective component and sodium chloride and dextran or hydroxyethyl starch as blood volume expanding component. This blood volume expander has improved blood volume expanding effect, can reduce heart and lung injuries caused by ischemia reperfusion, and can improve cardiovascular functions and energy metabolism
IC ICM A61K031-19
ICS A61K047-36; A61P007-08
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
IT **Blood substitutes**
Human
(application of blood volume expander in treating hemorrhagic shock)
IT **113-24-6**, Sodium pyruvate 7647-14-5, Sodium chloride, biological studies 9004-54-0, Dextran, biological studies 9005-27-0, Hydroxyethyl starch **52009-14-0**, Calcium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(application of blood volume expander in treating hemorrhagic shock)
IT **113-24-6**, Sodium pyruvate **52009-14-0**, Calcium pyruvate
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic**

Bone, **neoplasm**
Gout
Osteoarthritis
Rheumatoid arthritis
Sarcoidosis
Surgery
(pain associated with; method of improving medical treatment of pain by administering combination of strontium-containing compound and second active substance)

IT Arthritis
(**psoriatic** arthritis, pain associated with; method of improving medical treatment of pain by administering combination of strontium-containing compound and second active substance)

IT 50-33-9, Phenylbutazone, biological studies 50-48-6, Amitriptyline 50-52-2, Thioridazine 50-53-3, Thorazine, biological studies 50-78-2, Aspirin 52-86-8, Haldol 53-86-1, Indomethacin 56-06-4, 2,4-Diamino-6-hydroxypyrimidine 57-27-2, Morphine, biological studies 57-42-1, Meperidine 58-33-3, Phenergan 58-38-8, Prochlorperazine 58-39-9, Trilafon 60-87-7, Promethazine 61-68-7, Mefenamic acid 69-23-8, Fluphenazine 76-42-6, Oxycodone 76-57-3, Codeine 76-99-3, Methadone 77-07-6, Levorphanol 77-17-8, Normeperidine 79-17-4, Aminoguanidine 84-02-6, Compazine 103-90-2, Paracetamol 113-59-7, Taractan 117-89-5, Trifluoperazine 125-29-1, Hydrocodone 130-61-0, Mellaril 151-16-6, S-(2-Aminoethyl)isothiourea 359-83-1, Pentazocine 364-62-5, Metoclopramide 437-38-7, Fentanyl 440-17-5, Stelazine 466-99-9, Hydromorphone 526-26-1, Strontium salicylate 548-73-2, Inapsine 561-27-3, Heroin 868-19-9, Strontium tartrate 1977-10-2, Loxapine 2034-23-3, FR 038251 2062-78-4, Orap 2149-70-4 2986-19-8, S-Methylisothiourea 2986-20-1, S-Ethylisothiourea 4456-77-3, FR 038470 4673-26-1 5104-49-4, Flurbiprofen 5588-33-0, Serentil 5591-45-7, Navane 5786-21-0, Clozaril 6913-17-3, S-Isopropylisothiourea 7232-21-5, Reglan 7416-34-4, Molindone 13539-59-8, Apazone 15307-86-5, Diclofenac 15622-65-8, Moban 15687-27-1, Ibuprofen 16067-69-9, Strontium benzenesulfonate 16088-89-4 17035-90-4, NG-Monomethyl-L-arginine 20594-83-6, Nalbuphine 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22780-54-7, 2-Iminopiperidine 22780-54-7D, strontium salts 27203-92-5, Tramadol 27833-64-3, Loxitane 29679-58-1, Fenoprofen 32672-69-8, Mesoridazine besylate 36322-90-4, Piroxicam 37841-91-1, Isovelleral 38194-50-2, Sulindac 40182-75-0, Strontium citrate 40472-00-2 41839-80-9 42408-82-2, Butorphanol 51803-78-2, Nimesulide 52485-79-7, Buprenorphine 53648-55-8, Dezocine 53774-63-3 58493-49-5, Olvanil 65195-50-8, Scutigeral 71125-38-7, Meloxicam 78754-81-1, FR 191863 83002-04-4, CP55940 106266-06-2, Risperdal 111974-69-7, Quetiapine 111974-72-2, Seroquel 123663-49-0, T-614 128007-31-8, Arvanil 132539-06-1, Zyprexa 133587-00-5, NGMonomethyl-L-arginine acetate 135459-87-9, Strontium ranelate 146939-27-7, Geodon 155836-52-5, BW373U86 156719-41-4, S-Methyl-L-thiocitrulline 158089-95-3, S-2474 159860-31-8, SNC-121 175033-36-0, NCX4016 179469-40-0 183133-72-4, STrontium malonate 183293-82-5 189954-66-3, DFP 198470-84-7, Parecoxib 198470-85-8, Dynastat 251362-87-5 **278172-05-7** 303730-87-2 322766-10-9, Tiracoxib 472981-92-3, SB-366791 507471-56-9 535974-91-5 630395-06-1, SVT 2016 796104-84-2 796104-86-4 796104-90-0 796842-36-9 796842-37-0 796842-38-1 872049-77-9 872049-78-0 872049-79-1 872049-81-5 872049-83-7 872049-85-9 872049-86-0 872049-88-2 872049-89-3 872049-90-6 872049-91-7 872049-92-8 872049-93-9 872049-94-0 872049-95-1 872125-28-5 872200-43-6 872340-68-6, AZD 4717
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method of improving medical treatment of pain by administering

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

US 2006122274 A1 20060608 US 2005-269289 20051107
WO 2006089546 A1 20060831 WO 2005-DK710 20051107
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:

DK 2004-947	A	20040617
DK 2003-691	A	20030507
DK 2003-932	A	20030620
DK 2003-1820	A	20031209
US 2003-528442P	P	20031209
WO 2004-DK328	A2	20040506
WO 2005-DK140	A2	20050228
WO 2005-DK401	A2	20050617
WO 2005-DK404	A2	20050617

AB Methods for improving pain management in a mammal, the methods comprising administering a combination of a strontium-containing compound and a second therapeutically and/or prophylactically active substance selected from the group consisting of analgesic agents, anti-inflammatory agents and palliative agents to the mammal. Pharmaceutical compns. for use in such methods, comprising a strontium-containing compound and a second therapeutically and/or prophylactically active substance selected from the group consisting of analgesic agents, anti-inflammatory agents and palliative agents. For example, a tablet containing naproxen 250, strontium malonate 210, lactose 100, corn starch 30, and magnesium stearate 10 mg was formulated.

IC ICM A61P029-00
ICS A61K033-24; A61K031-415; A61K031-192

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

IT **Rheumatoid** arthritis
(adult-onset Still's disease, pain associated with; method of improving medical treatment of pain by administering combination of strontium-containing compound and second active substance)

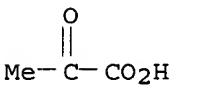
IT **Rheumatoid** arthritis
(juvenile, pain associated with; method of improving medical treatment of pain by administering combination of strontium-containing compound and second active substance)

IT Antiarthritics
Behcet's syndrome

Raloxifene 84485-00-7 85801-42-9 86111-26-4, Zindoxifene
89750-15-2, Glucagon-like peptide-2 89750-15-2D, Glucagon-like peptide
2, derivs. or fragments of 89778-26-7, Toremifene 89987-06-4,
Tiludronate 98007-99-9, ICI 164384 98774-23-3, Tesmilifene
103735-76-8, erythro-MEA 105462-24-6 114084-78-5, Ibandronate
115767-74-3, TAT-59 116057-75-1, Idoxifene 118072-93-8, Zoledronate
128607-22-7, Ospemifene 129453-61-8, Faslodex 129612-87-9, Miproxifene
135459-87-9, Strontium ranelate 165536-41-4, MDL-103323 170277-31-3,
Infliximab 175449-82-8, Matrix Metalloproteinase-13 180916-16-9,
Lasofoxifene 182133-25-1, LY-353381 182167-03-9, EM-800 183133-72-4,
Strontium malonate 185243-69-0, Etanercept 190791-29-8, CP-336156
198481-32-2, Bazedoxifene 199685-57-9, Onercept 205944-50-9,
Osteoprotegrin **278172-05-7** 303730-87-2 331731-18-1,
Adalimumab 428863-50-7, CDP 870 507471-54-7 507471-56-9
615258-40-7, AMG 162 796104-84-2 796104-86-4 796104-90-0
796842-36-9 796842-37-0 796842-38-1 872049-77-9 872049-85-9
872049-86-0 872049-88-2 872049-89-3 872049-91-7 872049-92-8
872049-94-0 872049-95-1 872085-78-4 872085-79-5 872125-28-5,
Strontium naproxenate 872130-23-9, ICI 183780
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(5-LOX inhibitor and bone and cartilage beneficial agent combinations for arthritis, osteoporosis, or pain)

IT **278172-05-7**
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(5-LOX inhibitor and bone and cartilage beneficial agent combinations for arthritis, osteoporosis, or pain)

RN 278172-05-7 HCAPLUS
CN Propanoic acid, 2-oxo-, strontium salt (9CI) (CA INDEX NAME)



●1/2 Sr

L102 ANSWER 8 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1354712 HCAPLUS
DOCUMENT NUMBER: 144:94350
TITLE: A method of improving the medical treatment of pain
INVENTOR(S): Christgau, Stephan; Hansen, Christian; Nilsson, Henrik
PATENT ASSIGNEE(S): Osteologix A/S, Den.
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005123192	A2	20051229	WO 2005-DK401	20050617

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DK 2004-948 A 20040617

AB Combination treatments, wherein a 5-lipoxygenase (5-LOX) inhibitor are administered together with a bone or cartilage beneficial compound in order to obtain a therapeutically beneficial effect in the treatment and/or prophylaxis of osteoarthritis, rheumatoid arthritis, osteoporosis or pain, and pharmaceutical compns. comprising a combination of a 5-LOX inhibitor and a bone and cartilage beneficial compound

IC ICM A61K045-00

CC 1-12 (Pharmacology)
Section cross-reference(s): 63

ST lipoxygenase inhibitor bone cartilage protectant combination osteoporosis **rheumatoid** arthritis; osteoarthritis pain 5LOX inhibitor bone cartilage beneficial agent combination

IT Analgesics
Antiosteoporotic agents
Antirheumatic agents
Bone resorption inhibitors
Bos taurus
Canis familiaris
Combination chemotherapy
Equus caballus
Hormone replacement therapy
Human
Mammalia
Osteoarthritis
Osteoporosis
Pain
Prophylaxis
Rheumatoid arthritis
Selective estrogen receptor modulators
Sus scrofa
(5-LOX inhibitor and bone and cartilage beneficial agent combinations for arthritis, osteoporosis, or pain)

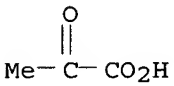
IT Interleukin 1
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists/inhibitors; 5-LOX inhibitor and bone and cartilage beneficial agent combinations for arthritis, osteoporosis, or pain)

IT 50-02-2, Dexamethasone 50-14-6, Vitamin D2 50-23-7, Hydrocortisone 53-03-2, Prednisone 56-53-1 67-96-9, Dihydrotachysterol 67-97-0, Vitamin D3 67-98-1, Ethamoxytriphetol 91-64-5D, Coumarin, derivs. 378-44-9, Betamethasone 446-72-0, Genistein 493-08-3D, Chroman, derivs. 526-26-1, Strontium salicylate 553-39-9, Allenolic acid 569-57-3, Chlorotrianisene 814-95-9, Strontium oxalate 868-19-9, Strontium tartrate 911-45-5, Clomiphene 1406-16-2, Vitamin D 1633-05-2, Strontium carbonate 1845-11-0, Nafoxidine 2624-43-3, Cyclophenyl 2809-21-4 3416-24-8, Glucosamine 5630-53-5, Tibolone 5863-35-4, Nitromifene citrate 7440-24-6D, Strontium, containing compds. 9002-64-6, Parathyroid hormone 9007-12-9, Calcitonin 9007-28-7, Chondroitin sulfate 10540-29-1, Tamoxifen 10596-23-3, Clodronate 12619-70-4D, Cyclodextrins, polysulfonated 16067-69-9 16088-89-4 22780-54-7 27540-07-4 29031-19-4, Glucosamine sulfate 29870-99-3, Strontium lactate 31477-60-8, Ormeloxifene 34816-55-2, Moxestrol 40182-75-0, Strontium citrate 40391-99-9 40472-00-2 41294-56-8, Alphacalcidol 41839-80-9 53774-63-3 66376-36-1, Alendronate 68047-06-3, 4-Hydroxytamoxifen 77599-17-8, Panomifene 78994-23-7, Levormeloxifene 82413-20-5, Droloxifene 82717-40-6 84449-90-1,

158089-95-3, S-2474 165536-41-4, MDL-103323 169799-44-4, Keratin sulfate 170713-75-4, Nociceptin 175033-36-0, NCX 4016 179469-40-0D, stronrium derivative 180064-38-4 180916-16-9, Lasofoxifene 182167-03-9, EM-800 189954-66-3, DFP 190791-29-8, CP-336156 192755-52-5, Pralnacasan 198481-32-2, Bazedoxifene **278172-05-7**
303730-87-2 322766-10-9, Tiracoxib 507471-54-7 507471-56-9
615258-40-7, AMG 162 630395-06-1, SVT 2016 796104-84-2 796104-86-4
796104-90-0 796842-36-9 796842-37-0 796842-38-1 872049-77-9
872049-78-0 872049-79-1 872049-81-5 872049-83-7 872049-85-9
872049-86-0 872049-88-2 872049-91-7 872049-92-8 872049-93-9
872049-94-0 872049-95-1 872093-25-9 872125-28-5
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(oral combination of strontium salt and other agents for improvement in treatment of arthritic diseases and associated pain)

IT **278172-05-7**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(oral combination of strontium salt and other agents for improvement in treatment of arthritic diseases and associated pain)

RN 278172-05-7 HCAPLUS
CN Propanoic acid, 2-oxo-, strontium salt (9CI) (CA INDEX NAME)



●1/2 Sr

L102 ANSWER 7 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1354726 HCAPLUS
DOCUMENT NUMBER: 144:81225
TITLE: 5-LOX inhibitors and bone and cartilage beneficial agent combinations for arthritis, osteoporosis, or pain
INVENTOR(S): Christgau, Stephan; Hansen, Christian; Nilsson, Henrik
PATENT ASSIGNEE(S): Osteologix A/S, Den.
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005123130	A2	20051229	WO 2005-DK403	20050617
WO 2005123130	A3	20060202		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

(oral combination of strontium salt and other agents for improvement in treatment of arthritic diseases and associated pain)

IT Arthritis
(**psoriatic** arthritis; oral combination of strontium salt and other agents for improvement in treatment of arthritic diseases and associated pain)

IT 50-02-2, Dexamethasone 50-18-0, Cyclophosphamide 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-33-9, Phenylbutazone, biological studies 50-78-2, Aspirin 52-67-5, Penicillamine 53-03-2, Prednisone 53-06-5, Cortisone 53-86-1, Indomethacin 56-53-1 57-27-2, Morphine, biological studies 57-42-1, Meperidine 58-15-1, Aminopyrine 59-05-2, Methotrexate 60-80-0, Antipyrine 61-68-7, Mefenamic acid 62-44-2, Phenacetin 62-75-9, Dimethylnitrosamine 64-85-7, Deoxycortone 67-98-1, Ethamoxytriphetol 69-72-7D, Salicylic acid, derivs. 76-42-6, Oxycodone 76-57-3, Codeine 76-99-3, Methadone 77-07-6, Levorphanol 77-17-8, Normeperidine 83-43-2, Methylprednisolone 91-64-5D, Coumarin, derivs. 118-42-3, Hydroxychloroquine 124-94-7, Triamcinolone 125-29-1, Hydrocodone 127-31-1, Fludrocortisone 129-20-4, Oxyphenbutazone 147-93-3, Thiosalicylic acid 359-83-1, Pentazocine 378-44-9, Betamethasone 437-38-7, Fentanyl 446-72-0, Genistein 446-86-6, Azathioprine 466-99-9, Hydromorphone 493-08-3D, Chroman, derivs. 526-26-1, Strontium salicylate 530-78-9, Flufenamic acid 552-94-3, Salsalate 553-39-9, Allenolic acid 561-27-3, Heroin 564-25-0, Doxycycline 569-57-3, Chlorotrianisene 644-62-2 853-34-9, Kebuzone 868-19-9, Strontium tartrate 911-45-5, Clomiphene 1400-61-9, Nystatin 1845-11-0, Nafoxidine 2624-43-3, Cyclophenyl 2809-21-4 3416-24-8, Glucosamine 4419-39-0, Beclomethasone 5104-49-4, Flurbiprofen 5630-53-5, Tibolone 9002-64-6, Parathyroid hormone 9002-72-6, Growth hormone 9004-61-9, Hyaluronic acid 9007-28-7, Chondroitin sulfate 10118-90-8, Minocycline 10448-84-7, Nitromifene 10540-29-1, Tamoxifen 10596-23-3, Clodronate 12244-57-4 13598-36-2D, Phosphonic acid, alkylidenebis- derivs. 15307-86-5, Diclofenac 15687-27-1, Ibuprofen 15722-48-2, Olsalazine 16067-69-9 16088-89-4 20594-83-6, Nalbuphine 21256-18-8, Oxaprozin 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 25322-68-3D, Polyethylene glycol, conjugates with IL-1 receptor derivs. 26171-23-3, Tolmetin 26983-52-8, Diphenol 27203-92-5, Tramadol 27540-07-4 29031-19-4, Glucosamine sulfate 29679-58-1, Fenoprofen 31477-60-8, Ormeloxifene 33369-31-2, Zomepirac 34816-55-2, Moxestrol 36322-90-4, Piroxicam 38194-50-2, Sulindac 40182-75-0, Strontium citrate 40391-99-9 40472-00-2 41340-25-4, Etodolac 41593-31-1, Dihydrochrysene 41839-80-9 42408-82-2, Butorphanol 42924-53-8, Nabumetone 51146-56-6, Dexibuprofen 51333-22-3, Budesonide 51803-78-2, Nimesulide 52485-79-7, Buprenorphine 53597-27-6, Fendosal 53648-55-8, Dezocine 59122-46-2, Misoprostol 59804-37-4, Tenoxicam 59865-13-3, Cyclosporine 60118-07-2, Endorphin 63524-05-0 66376-36-1, Alendronate 67763-96-6, Insulin-like growth factor-1 68047-06-3, 4-Hydroxytamoxifen 71125-38-7, Meloxicam 74103-06-3, Ketorolac 77599-17-8, Panomifene 78994-23-7, Levormeloxifene 81093-37-0, Pravastatin 82413-20-5, Droloxifene 84449-90-1, Raloxifene 85801-42-9 86111-26-4, Zindoxifene 89750-15-2, Glucagon-like peptide 2 89778-26-7, Toremifene 89987-06-4, Tiludronate 93957-54-1, Fluvastatin 98007-99-9, ICI 164384 98774-23-3, Tesmilifene 103735-76-8, erythro-MEA 105462-24-6 114084-78-5, Ibandronate 115767-74-3, TAT-59 116057-75-1, Idoxifene 118072-93-8, Zoledronate 121368-58-9, Olpadronate 123663-49-0, T-614 128607-22-7 129453-61-8 129612-87-9, Miproxifene 130996-28-0, P 54 134195-17-8, Cyclodextrin sulfate 134523-00-5, Atorvastatin 135459-87-9, Strontium ranelate 137945-48-3, CT 3 138330-18-4, Incadronate 143090-92-0, Anakinra 145599-86-6, Cerivastatin

US	2003-528442P	P 20031209
WO	2004-DK328	A2 20040506
WO	2005-DK140	A2 20050228
WO	2005-DK401	A2 20050617
WO	2005-DK404	A2 20050617

AB Improved treatments of joint diseases, such as, e.g. osteoarthritis and rheumatoid arthritis, and pain, comprise a strontium-containing compound administered alone or in combination with one or more second therapeutically and/or prophylactically active substances. The second active substance is selected from the group consisting of bisphosphonates, glucosamine, pallitative agents, analgesic agents, disease modifying anti-rheumatic compds. (DMARDs), selective estrogen receptor modulators (SERMs), aromatase inhibitors, non-steroidal anti-inflammatory agents (NSAIDs), COX-2 inhibitors, COX-3 inhibitors, opioids, inhibitors/antagonists of IL-1, inhibitors/antagonists of TNF-α, inhibitors of matrix metallo-proteinases (MMPs), cathepsin K inhibitors, inhibitors/antagonists of RANK-ligand, statins, glucocorticoids, chondroitin sulfate, NMDA receptor antagonists, inhibitors of interleukin-I converting enzyme, Calcitonin gene related peptide antagonists, glycine antagonists, vanilloid receptor antagonists, inhibitors of inducible nitric oxide synthetase (iNOS), N-acetylcholine receptor agonists, neurokinin antagonists, neuroleptic agents, PAR2 receptor antagonists and anabolic growth factors acting on joint tissue components. Pharmaceutical compns. comprising a strontium-containing compound and a second therapeutically and/or prophylactically active substance as defined above are also described. Thus, a tablet formulation to be administrated one to two times daily contained alendronate 10 mg, strontium malonate 200 mg, lactose 100 mg, corn starch (for mixing) 15 mg, corn starch (for paste) 15 mg, and magnesium stearate 10 mg.

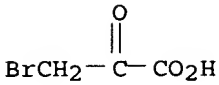
IC ICM A61P029-00
ICS A61P029-02; A61K031-65; A61K033-24; A61K031-663; A61K031-737; A61K031-519; A61K045-06; A61K031-7008; A61K031-573; A61K031-28

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

IT Capsaicin receptors
Interleukin 1
Neurokinins
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; oral combination of strontium salt and other agents for improvement in treatment of arthritic diseases and associated pain)

IT **Rheumatoid** arthritis
(juvenile; oral combination of strontium salt and other agents for improvement in treatment of arthritic diseases and associated pain)

IT Anabolic agents
Analgesics
Antiarthritics
Antirheumatic agents
Arthritis
Behcet's syndrome
Cholinergic agonists
Combination chemotherapy
Gout
Human
Osteoarthritis
Pain
Rheumatoid arthritis
Sarcoidosis
Selective estrogen receptor modulators
Tranquilizers



● Na

L102 ANSWER 6 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1354741 HCAPLUS
DOCUMENT NUMBER: 144:94351
TITLE: A method of improving treatments in rheumatic and arthritic diseases using strontium salts
INVENTOR(S): Christgau, Stephan; Hansen, Christian; Nilsson, Henrik
PATENT ASSIGNEE(S): Osteologix A/S, Den.
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005123193	A2	20051229	WO 2005-DK404	20050617
WO 2005123193	A3	20060302		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2006122274	A1	20060608	US 2005-269289	20051107
WO 2006089546	A1	20060831	WO 2005-DK710	20051107
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PRIORITY APPLN. INFO.:		
DK 2004-950	A	20040617
DK 2003-691	A	20030507
DK 2003-932	A	20030620
DK 2003-1820	A	20031209

halooxopropionate **cancer** treatment; sodium bromooxopropionate **cancer** treatment

IT Uterus, **neoplasm**
(cervix; halooxopropionate compds. as anticancer agents)

IT Intestine, **neoplasm**
(colon; halooxopropionate compds. as anticancer agents)

IT Antitumor agents
Apoptosis
Bone, **neoplasm**
Brain, **neoplasm**
Cell proliferation
Chemotherapy
Chronic lymphocytic leukemia
Combination chemotherapy
Cytoprotective agents
Cytotoxic agents
Drug delivery systems
Esophagus, **neoplasm**
Gamma ray
Gene therapy
Head and Neck, **neoplasm**
Human
Hypoxia
Immunotherapy
Kidney, **neoplasm**
Leukemia
Liver, **neoplasm**
Lung, **neoplasm**
Lymphoma
Mammary gland, **neoplasm**
Melanoma
Multidrug resistance
Necrosis
Neoplasm
Ovary, **neoplasm**
Pancreas, **neoplasm**
Pharynx, **neoplasm**
Prostate gland, **neoplasm**
Radiotherapy
Skin, **neoplasm**
Spleen, **neoplasm**
Stabilizing agents
Stomach, **neoplasm**
Surgery
Tricarboxylic acid cycle
(halooxopropionate compds. as anticancer agents)

IT **Neoplasm**
(head and neck; halooxopropionate compds. as anticancer agents)

IT **Neoplasm**
(solid; halooxopropionate compds. as anticancer agents)

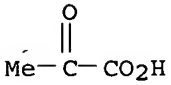
IT **876344-66-0**
RL: **PAC (Pharmacological activity)**; PRP (Properties); BIOL (Biological study)
(halooxopropionate compds. as anticancer agents)

IT **876344-66-0**
RL: **PAC (Pharmacological activity)**; PRP (Properties); BIOL (Biological study)
(halooxopropionate compds. as anticancer agents)

RN 876344-66-0 HCAPLUS

CN Propanoic acid, 3-bromo-2-oxo-, sodium salt (9CI) (CA INDEX NAME)

CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



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L102 ANSWER 5 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:164738 HCAPLUS
DOCUMENT NUMBER: 144:226267
TITLE: Propyl 3-bromo-2-oxopropionate and derivatives as anticancer agents
INVENTOR(S): Huang, Peng; Keating, Michael J.; Xu, Ruihau
PATENT ASSIGNEE(S): Board of Regents, The University of Texas System, USA
SOURCE: PCT Int. Appl., 134 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006020403	A2	20060223	WO 2005-US26702	20050728
WO 2006020403	A3	20060601		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

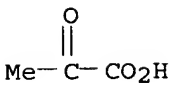
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

US 2006058383	A1	20060316	US 2005-192281	20050728
PRIORITY APPLN. INFO.:			US 2004-591643P P	20040728
OTHER SOURCE(S):		MARPAT 144:226267		

AB The invention is directed to compns. that inhibit glycolysis, preferentially in cancer. Specifically, the anticancer compns. comprise 3-halo-2-oxopropionate and its derivs., such as ester derivs. However, in specific embodiments, the anticancer composition is sodium 3-halo-2-oxopropionate, such as sodium 3-bromo-2-oxopropionate and a stabilizing agent, such as carbonic acid. In particular embodiments, the compns. of the invention further comprise a metabolic intermediate for normal cells to utilize in a pathway for an alternate energy source, thereby providing protection to normal cells. In other embodiments, the 3-halo-2-oxopropionate or its ester derivative is used in combination with an addnl. cancer therapy, such as radiation and/or a drug.

CC 1-6 (Pharmacology)
Section cross-reference(s): 8

ST halooxopropionate **cancer** treatment glycolysis inhibition; ester



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REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 4 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:275958 HCAPLUS
DOCUMENT NUMBER: 144:411297
TITLE: Manufacture of milk powder for reducing or keeping blood lipids
INVENTOR(S): Chen, Shangwu; Ren, Fazheng; Wang, Jinzhi; Li, Lili; Liu, Meiyu; Guo, Huiyuan; Chen, Shuxing; Lou, Fei; Jiang, Jingli
PATENT ASSIGNEE(S): China Agricultural University, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 13 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1736223	A	20060222	CN 2004-10058391	20040816
PRIORITY APPLN. INFO.:			CN 2004-10058391	20040816

AB The title milk powder is composed of (per 100 g) calcium pyruvate 3.542-5.678 g, magnesium sulfate heptahydrate 0.2-0.705 g, zinc glycinate 27.46-68.16 mg, EDTA sodium iron salt 87-180 mg, chromium picolinate 320-830 μg, vitamin A 648-1,765 μg, vitamin B1 0.4-2.40 mg, vitamin B2 0.32-2.62 mg, vitamin B6 1.46-5.23 mg, vitamin C 260-275 mg, vitamin E 5.42-12.8 mg, vitamin D 2-6.15 μg, nicotinic acid 7.5-12.5 mg, and skim milk powder in balance. The title manufacture method comprises cleaning and skimming fresh cow milk, adding the above materials, sterilizing, homogenizing under high pressure, concentrating under vacuum, spray-drying, cooling, and sieving. The level of leptin and insulin in serum has obviously reduced after applying the milk powder.

CC 17-8 (Food and Feed Chemistry)
Section cross-reference(s): 63

IT 50-81-7, Vitamin C, biological studies 59-43-8, Vitamin B1, biological studies 59-67-6, Nicotinic acid, biological studies 63-42-3, Lactose 68-26-8, Vitamin A 83-88-5, Vitamin B2, biological studies 1406-16-2, Vitamin D 1406-18-4, Vitamin E 7487-88-9, Magnesium sulfate, biological studies 8059-24-3, Vitamin B6 14281-83-5, Zinc glycinate 14639-25-9, Chromium(III) picolinate 15708-41-5, Sodium iron EDTA **52009-14-0**, Calcium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(manufacture of milk powder for reducing or keeping blood lipids)

IT **52009-14-0**, Calcium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(manufacture of milk powder for reducing or keeping blood lipids)

RN 52009-14-0 HCAPLUS

IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

US 2006083793 A1 20060420 US 2005-240267 20050929

PRIORITY APPLN. INFO.: US 2004-614134P P 20040929

AB Disclosed is a nutritional composition that includes creatinol, e.g., creatinol O-phosphate, wherein the nutritional composition includes a timed-release delivery system. The timed-release delivery system may include one of quick release, slow release and controlled-release delivery system. Ingestion of the nutritional composition provides a method for, e.g., promoting muscle performance and/or acting as an hydrogen (H+) blocker. A serving of the nutritional composition comprises the following ingredients: creatinol, ALA, e evodiamine, yohimbine HCl, niacin, caffeine.

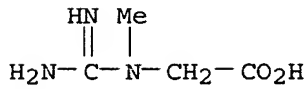
IC ICM A61K031-661
ICS A61P003-02

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 17

IT 50-69-1, Ribose 50-81-7, Ascorbic acid, biological studies 50-99-7, Dextrose, biological studies 53-43-0, DHEA 56-65-5, AT-P, biological studies 56-81-5, Glycerol, biological studies **57-00-1**, **Creatine** 58-08-2, Caffeine, biological studies 59-43-8, Thiamine, biological studies 59-67-6, Niacin, biological studies 65-19-0, Yohimbine hydrochloride 74-79-3, Arginine, biological studies 83-88-5, Riboflavin, biological studies 107-35-7, Taurine 107-43-7, Betaine 144-55-8, Sodium bicarbonate, biological studies 305-84-0, Carnosine 518-17-2, Evodiamine 616-91-1 625-08-1 1200-22-2, α-Lipoic acid 1406-18-4, Vitamin E 1968-05-4, 3,3'-Diindolylmethane 3416-24-8, Glucosamine 4547-24-4, Corosolic acid 6903-79-3, **Creatinol** O-phosphate 7439-95-4, Magnesium, biological studies 7440-47-3, Chromium, biological studies 7440-62-2, Vanadium, biological studies 7440-66-6, Zinc, biological studies 7778-18-9, Calcium sulfate 7782-49-2, Selenium, biological studies 8059-24-3, Vitamin B6 9007-28-7, Chondroitin sulfate 10284-63-6, Pinitol 13429-32-8D, **Creatinol**, amides 27774-13-6, Vanadyl sulfate 42971-09-5, Vinpocetine **52009-14-0**, Calcium pyruvate 70796-17-7, Citrulline malate 121250-47-3, Conjugated linoleic acid 142583-61-7, Policosanol 174882-69-0, Pycnogenol
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**;
BIOL (Biological study); USES (Uses)
(nutritional composition for promoting muscle performance and acting as hydrogen (H+) blocker)

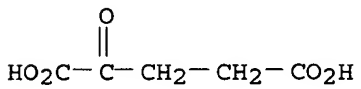
IT **57-00-1**, **Creatine 52009-14-0**, Calcium pyruvate
RL: **FFD (Food or feed use)**; **THU (Therapeutic use)**;
BIOL (Biological study); USES (Uses)
(nutritional composition for promoting muscle performance and acting as hydrogen (H+) blocker)

RN 57-00-1 HCAPLUS
CN Glycine, N-(aminoiminomethyl)-N-methyl- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

IT **Rheumatoid** arthritis
(periarticular erosions in; oral compns. of water-soluble strontium salts for treatment of cartilage and/or bone conditions)
IT 813-97-8P 868-19-9P, Strontium tartrate 7440-24-6DP, Strontium, salts 16088-89-4P, Strontium maleate 29870-99-3P, Strontium lactate 40472-00-2P, Strontium succinate 41839-80-9P 120312-20-1P 127357-26-0P 183133-72-4P, Strontium malonate **796104-83-1P** 796104-84-2P 796842-36-9P 796842-37-0P 889655-92-9P 889655-93-0P **889655-94-1P** 889655-95-2P
RL: **PKT (Pharmacokinetics)**; PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(oral compns. of water-soluble strontium salts for treatment of cartilage and/or bone conditions)
IT **796104-83-1P 889655-94-1P**
RL: **PKT (Pharmacokinetics)**; PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(oral compns. of water-soluble strontium salts for treatment of cartilage and/or bone conditions)
RN 796104-83-1 HCAPLUS
CN Pentanedioic acid, 2-oxo-, strontium salt (1:1) (9CI) (CA INDEX NAME)



● Sr

RN 889655-94-1 HCAPLUS

L102 ANSWER 3 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:318951 HCAPLUS
DOCUMENT NUMBER: 144:357710
TITLE: Nutritional composition for promoting muscle performance and acting as hydrogen (H+) blocker
INVENTOR(S): Gardiner, Paul T.; Heuer, Marvin A.
PATENT ASSIGNEE(S): Aplodan Formulations Ltd., Can.
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006034586	A1	20060406	WO 2005-CA1485	20050929

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WO 2005123193 A2 20051229 WO 2005-DK404 20050617
WO 2005123193 A3 20060302
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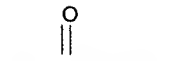
PRIORITY APPLN. INFO.:

DK 2003-691	A	20030507
DK 2003-932	A	20030620
DK 2003-1820	A	20031209
US 2003-528442P	P	20031209
WO 2004-DK328	A2	20040506
WO 2005-DK140	A2	20050228
WO 2005-DK401	A2	20050617
WO 2005-DK404	A2	20050617
DK 2004-313	A	20040226
US 2004-548529P	P	20040226
DK 2004-947	A	20040617
DK 2004-950	A	20040617

AB Compds. and pharmaceutical compns. for use in the treatment and/or prophylaxis of cartilage and/or bone conditions and methods of treating such condition are described. The compds. are salts of strontium that have a water-solubility of about 1 g/L to about 100 g/L at room temperature, especially amino acid salts of strontium or dicarboxylic acid salts of strontium. Examples of novel water-soluble strontium salts are, e.g., strontium glutamate and strontium α-ketoglutarate. The present invention also relates to an improved method for preparing the strontium salt of glutamic acid. Thus, tablets containing strontium malonate 300 mg, microcryst. cellulose 43.5 mg, Polyvidone 12 mg, colloidal silica 2.5 mg, magnesium stearate 2.5 mg, and water as needed were prepared by wet granulation and compression. The single dose pharmacokinetic study demonstrated that strontium was taken up in a dose dependent fashion when administered as a strontium malonate oral tablet to human subjects. The bioavailability of strontium from tablets containing strontium malonate 300 mg was better than that from the strontium ranelate dosage form (Protelos).

INCL 514566000; 562563000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 23, 34, 62
IT **Neoplasm**
(hypercalcemia; oral compns. of water-soluble strontium salts for treatment of cartilage and/or bone conditions)
IT Bone, **neoplasm**
(metastasis; oral compns. of water-soluble strontium salts for treatment of cartilage and/or bone conditions)



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L102 ANSWER 2 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:540925 HCAPLUS
DOCUMENT NUMBER: 145:34202
TITLE: Water-soluble strontium salts for use in treatment of cartilage and/or bone conditions
INVENTOR(S): Hansen, Christian; Nilsson, Henrik; Christgau, Stephan; Andersen, Jens E. T.
PATENT ASSIGNEE(S): Den.
SOURCE: U.S. Pat. Appl. Publ., 60 pp., Cont.-in-part of Appl. No. PCT/DK2005/000404.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006122274	A1	20060608	US 2005-269289	20051107
WO 2004098619	A2	20041118	WO 2004-DK328	20040506
WO 2004098619	A3	20050310		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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WO 2005082385	A1	20050909	WO 2005-DK140	20050228

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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WO 2005123192	A2	20051229	WO 2005-DK401	20050617

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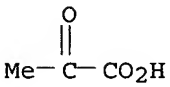
Vein
Yeast
(sterilization of biol. materials with irradiation using α-keto acid stabilizers)

IT **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 298-12-4, Glyoxylic acid **305-72-6** 328-42-7, 2-Ketosuccinic acid 328-50-7, α-Ketoglutaric acid 431-03-8, Diacetyl 583-92-6, 4-Methylthio-2-oxobutanoic acid 600-18-0, α-Ketobutyric acid 600-22-6, Methyl pyruvate 611-73-4 669-90-9, 2-keto-D-Gluconic acid 759-05-7, 2-keto-3-Methylbutyric acid 816-66-0 1069-03-0 1460-34-0, 3-Methyl-2-oxovaleric acid 1821-02-9, 2-Ketopentanoic acid 2492-75-3, 2-Ketohexanoic acid 3184-35-8, α-Ketoadipic acid **52009-14-0**, Calcium Pyruvate
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sterilization of biol. materials with irradiation using α-keto acid stabilizers)

IT **113-24-6**, Sodium pyruvate **305-72-6** **52009-14-0**, Calcium Pyruvate
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sterilization of biol. materials with irradiation using α-keto acid stabilizers)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 305-72-6 HCAPLUS
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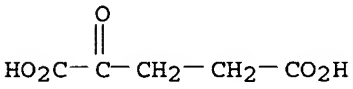

RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006073461	A2	20060713	WO 2005-US15518	20050505

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2004-567803P P 20040505

AB Methods are disclosed for sterilizing biol. materials, such as tissues, to reduce the level of one or more biol. contaminants or pathogens therein, such as viruses, bacteria (including inter- and intracellular bacteria, such as mycoplasmas, ureaplasmas, nanobacteria, chlamydia, rickettsias), yeasts, molds, fungi, single or multicellular parasites, and/or prions or similar agents responsible. These methods involve the use of α-keto acid stabilizers in methods of sterilizing biol. materials with irradiation Thus, the effects of gamma irradiation on thrombin irradiated in the presence of 50 mM sodium ascorbate, 50 mM sodium pyruvate or 104 μM CuSO4 were examined Sodium ascorbate, sodium pyruvate, CuSO4 and combinations of ascorbate/pyruvate and pyruvate/CuSO4 had protective effects on the clotting activity of frozen bovine thrombin during irradiation The combination of 50 mM ascorbate and 50 mM pyruvate showed the best protective effects on frozen bovine thrombin clotting activity. The combination of pyruvate/CuSO4 showed better protective effects on frozen bovine thrombin than pyruvate or CuSO4 used alone.

IC ICM A61F
CC 63-8 (Pharmaceuticals)
IT Animal tissue
Animal virus
Artery
Biological materials
Blood plasma
Blood serum
Bone
Bone marrow
Cartilage
Eubacteria
Fungi
Gamma ray sterilization
Human
Joint, anatomical
Ligament
Mold (fungus)
Nerve
Parasite
Pathogen
Stabilizing agents
Tendon
Tooth

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L43           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L42 AND L31
L50           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CREATINE/CN
L51           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  NICOTINAMIDE/CN
L52        6355 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50
L53        9424 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L51
L54        2023 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L50 OR L51)) (L) L20
L55           9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54 AND L31
L56      194670 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?PHOSPHORYLAT?/BI
L57           9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L56
L58         104 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND L56
L59             QUE  ABB=ON  PLU=ON  SALT#/BI
L60           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L58 AND L59
L63             QUE  ABB=ON  PLU=ON  (?VIRAL? OR ?BACTER? OR ?FUNGAL? OR
                ?FUNGI? OR ?PARASIT? OR HIV OR AIDS OR ALZHEIM? OR ?DEMEN
                TIA? OR ?ANGIOGEN? OR ?CANCER? OR ?CARCINO? OR ?NEOPLAS?
                OR ?TUMOR? OR ?APHTHOUS ULCER? OR ?ASTHMA? OR ATOPIC DERM
                ATIT? OR ?PSORIA?)/OBI
L64          65 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L63
L65             QUE  ABB=ON  PLU=ON  (BENIGN PROSTAT? HYPERTROPH?/OBI OR
                BLOOD SUBSTITUT?/OBI OR BREAST CANCER/OBI OR ?CACHEXIA?/O
                BI OR ?PNEUMONIA?/OBI OR STD#/OBI OR SEXUAL? TRANSMIT?/OB
                I OR CANDIDA ALBICIAN?/OBI OR PARKINSON?/OBI OR PENTUMORA
                L BRAIN EDEM?/OBI OR (RAGWEED/OBI (3A) ?ALLERG?/OBI))
L66           8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L65
L67             QUE  ABB=ON  PLU=ON  RENAL DISEAS?/OBI OR KIDNEY DISEAS?/
                OBI OR RESTENOSIS/OBI OR ?RHEUMATOID?/OBI OR ALLERG?/OBI
                OR ROTAVIRUS/OBI OR SEPTIC SHOCK/OBI OR ?TUMOR?/OBI OR ?T
                UMOUR?/OBI OR STROKE/OBI OR ?THROMBOSIS?/OBI OR ?DIABET?/
                OBI
L68          28 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L67
L71             QUE  ABB=ON  PLU=ON  VISCER? LEISHMAN?/OBI OR MALARIA/OBI
                 OR PERIODONTAL DISEAS?/OBI OR GUM DISEAS?/OBI OR CNS DIS
                ORD?/OBI OR CERVICAL DYSTOM?/OBI OR SPASM? TORTICOL?/OBI
                OR CHORID? NEOVASCULAR/OBI OR HEPATITIS/OBI OR COLITIS/OB
                I OR CYSTIC FIBROSIS/OBI
L72           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L71 AND L31
L78          34 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) FFD/RL
L79          18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L78 AND L31
L81         104 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 OR L55 OR L57 OR L60 OR
                L64 OR L66 OR L68 OR L72 OR L79
L84          12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L81 AND (L52 OR L53 OR L54)


=> s (L43 or L55 or L57 or L60 or L64 or L66 or L68 or L72 or L79 or L84 ) not L100
L102        100 (L43 OR L55 OR L57 OR L60 OR L64 OR L66 OR L68 OR L72 OR L79 OR
                L84 ) NOT L100
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→ printed with author search

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=> d ibib abs hitind hitstr L102 1-100

L102 ANSWER 1 OF 100  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:681317  HCAPLUS
DOCUMENT NUMBER:          145:130981
TITLE:                    Methods of sterilizing biological mixtures using
                          alpha-keto acids
INVENTOR(S):              Burgess, Wilson; Mann, David; Drohan, William; Miekka,
                          Shirley
PATENT ASSIGNEE(S):       Clearant Inc., USA
SOURCE:                   PCT Int. Appl., 38 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
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Structure attributes must be viewed using STN Express query preparation.
L17         7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L18         6003 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND NC=1
L20              QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23       549863 SEA FILE=REGISTRY ABB=ON  PLU=ON  A1/PG
L24       346070 SEA FILE=REGISTRY ABB=ON  PLU=ON  A2/PG
L27         1629 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L18
L28          669 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29           21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (L23 OR L24)
L30          669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L28 OR L29)
L31          226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) L20
L78           34 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) FFD/RL
L79           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L78 AND L31


=> d stat que L84
L1               STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
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L3           389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8               STR
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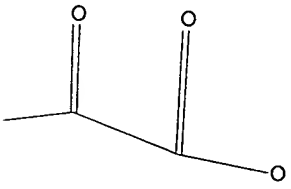


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Structure attributes must be viewed using STN Express query preparation.
L10        24561 SEA FILE=REGISTRY SSS FUL L8
L15              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L17         7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L18         6003 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND NC=1
L20              QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23       549863 SEA FILE=REGISTRY ABB=ON  PLU=ON  A1/PG
L24       346070 SEA FILE=REGISTRY ABB=ON  PLU=ON  A2/PG
L27         1629 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L18
L28          669 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29           21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (L23 OR L24)
L30          669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L28 OR L29)
L31          226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) L20
L36         2255 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L3 OR L17) (L) L20
L37        27352 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?NICOTINAMID?/BI
L38            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?NICATINAMID?/BI
L39        99387 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?CREATIN?/BI
L41         4550 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L37 OR L38 OR L39)) (L) L20

L42           79 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND L41
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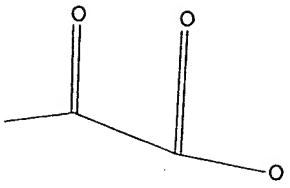

Structure attributes must be viewed using STN Express query preparation.
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L15 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
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L18 6003 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND NC=1
L20 QUE ABB=ON PLU=ON (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23 549863 SEA FILE=REGISTRY ABB=ON PLU=ON A1/PG
L24 346070 SEA FILE=REGISTRY ABB=ON PLU=ON A2/PG
L27 1629 SEA FILE=REGISTRY ABB=ON PLU=ON L17 NOT L18
L28 669 SEA FILE=REGISTRY ABB=ON PLU=ON L27 AND (L23 OR L24)
L29 21 SEA FILE=REGISTRY ABB=ON PLU=ON L3 AND (L23 OR L24)
L30 669 SEA FILE=REGISTRY ABB=ON PLU=ON (L28 OR L29)
L31 226 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (L) L20
L71 QUE ABB=ON PLU=ON VISCER? LEISHMAN?/OBI OR MALARIA/OBI OR PERIODONTAL DISEAS?/OBI OR GUM DISEAS?/OBI OR CNS DISORD?/OBI OR CERVICAL DYSTOM?/OBI OR SPASM? TORTICOL?/OBI OR CHORID? NEOVASCULAR/OBI OR HEPATITIS/OBI OR COLITIS/OBI OR CYSTIC FIBROSIS/OBI
L72 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L71 AND L31

=> d stat que L79
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
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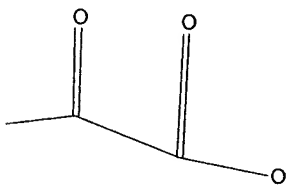
L3 389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8 STR



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L15 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

```
L66             8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L65


=> d stat que L68
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
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L3            389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8              STR
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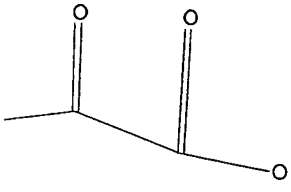

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Structure attributes must be viewed using STN Express query preparation.
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
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L18          6003 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND NC=1
L20               QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23        549863 SEA FILE=REGISTRY ABB=ON  PLU=ON  A1/PG
L24        346070 SEA FILE=REGISTRY ABB=ON  PLU=ON  A2/PG
L27          1629 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L18
L28           669 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29            21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (L23 OR L24)
L30           669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L28 OR L29)
L31           226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) L20
L67               QUE  ABB=ON  PLU=ON  RENAL DISEAS?/OBI OR KIDNEY DISEAS?/
                  OBI OR RESTENOSIS/OBI OR ?RHEUMATOID?/OBI OR ALLERG?/OBI
                  OR ROTAVIRUS/OBI OR SEPTIC SHOCK/OBI OR ?TUMOR?/OBI OR ?T
                  UMOUR?/OBI OR STROKE/OBI OR ?THROMBOSIS?/OBI OR ?DIABET?/
                  OBI
L68            28 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L67


=> d stat que L72
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2              SCR 2040
L3            389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8              STR
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Structure attributes must be viewed using STN Express query preparation.
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L18        6003 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND NC=1
L20             QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23      549863 SEA FILE=REGISTRY ABB=ON  PLU=ON  A1/PG
L24      346070 SEA FILE=REGISTRY ABB=ON  PLU=ON  A2/PG
L27        1629 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L18
L28         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (L23 OR L24)
L30         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L28 OR L29)
L31         226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) L20
L63             QUE  ABB=ON  PLU=ON  (?VIRAL? OR ?BACTER? OR ?FUNGAL? OR
                ?FUNGI? OR ?PARASIT? OR HIV OR AIDS OR ALZHEIM? OR ?DEMEN
                TIA? OR ?ANGIOGEN? OR ?CANCER? OR ?CARCINO? OR ?NEOPLAS?
                OR ?TUMOR? OR ?APHTHOUS ULCER? OR ?ASTHMA? OR ATOPIC DERM
                ATIT? OR ?PSORIA?)/OBI
L64          65 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L63


=> d stat que L66
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
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L3           389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8              STR
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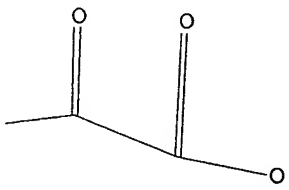


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Structure attributes must be viewed using STN Express query preparation.
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L15             STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L17        7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L18        6003 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND NC=1
L20             QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23      549863 SEA FILE=REGISTRY ABB=ON  PLU=ON  A1/PG
L24      346070 SEA FILE=REGISTRY ABB=ON  PLU=ON  A2/PG
L27        1629 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L18
L28         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (L23 OR L24)
L30         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L28 OR L29)
L31         226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) L20
L65             QUE  ABB=ON  PLU=ON  (BENIGN PROSTAT? HYPERTROPH?/OBI OR
                BLOOD SUBSTITUT?/OBI OR BREAST CANCER/OBI OR ?CACHEXIA?/O
                BI OR ?PNEUMONIA?/OBI OR STD#/OBI OR SEXUAL? TRANSMIT?/OB
                I OR CANDIDA ALBICIAN?/OBI OR PARKINSON?/OBI OR PENTUMORA
                L BRAIN EDEM?/OBI OR (RAGWEED/OBI (3A) ?ALLERG?/OBI))
```
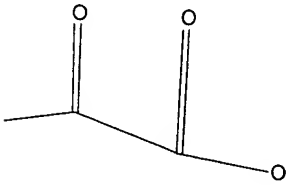
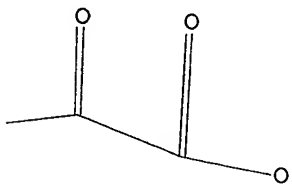

```
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2              SCR 2040
L3          389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8              STR
```

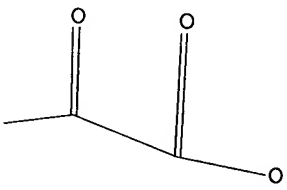


```
Structure attributes must be viewed using STN Express query preparation.
L10       24561 SEA FILE=REGISTRY SSS FUL L8
L15             STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L17        7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L20             QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L36        2255 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L3 OR L17) (L) L20
L56      194670 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?PHOSPHORYLAT?/BI
L58         104 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND L56
L59             QUE  ABB=ON  PLU=ON  SALT#/BI
L60           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L58 AND L59


=> d stat que L64
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2              SCR 2040
L3          389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8              STR
```

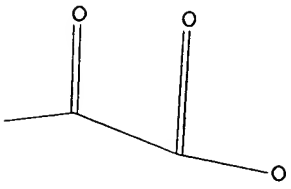


```
Structure attributes must be viewed using STN Express query preparation.
L10       24561 SEA FILE=REGISTRY SSS FUL L8
L15             STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *
```

```
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L17        7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L18        6003 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND NC=1
L20             QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23      549863 SEA FILE=REGISTRY ABB=ON  PLU=ON  A1/PG
L24      346070 SEA FILE=REGISTRY ABB=ON  PLU=ON  A2/PG
L27        1629 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L18
L28         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (L23 OR L24)
L30         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L28 OR L29)
L31         226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) L20
L50           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CREATINE/CN
L51           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  NICOTINAMIDE/CN
L54        2023 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L50 OR L51)) (L) L20
L55           9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54 AND L31


=> d stat que L57
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2              SCR 2040
L3           389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8              STR
```




```
Structure attributes must be viewed using STN Express query preparation.
L10       24561 SEA FILE=REGISTRY SSS FUL L8
L15             STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L17        7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L18        6003 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND NC=1
L20             QUE  ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23      549863 SEA FILE=REGISTRY ABB=ON  PLU=ON  A1/PG
L24      346070 SEA FILE=REGISTRY ABB=ON  PLU=ON  A2/PG
L27        1629 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L18
L28         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (L23 OR L24)
L30         669 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L28 OR L29)
L31         226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) L20
L56      194670 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?PHOSPHORYLAT?/BI
L57           9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L56


=> d stat que L60
```



Structure attributes must be viewed using STN Express query preparation.
L10 24561 SEA FILE=REGISTRY SSS FUL L8
L15 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

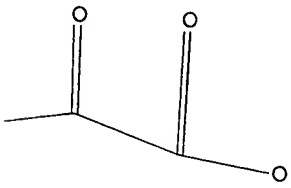
Structure attributes must be viewed using STN Express query preparation.
L17 7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L18 6003 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND NC=1
L20 QUE ABB=ON PLU=ON (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23 549863 SEA FILE=REGISTRY ABB=ON PLU=ON A1/PG
L24 346070 SEA FILE=REGISTRY ABB=ON PLU=ON A2/PG
L27 1629 SEA FILE=REGISTRY ABB=ON PLU=ON L17 NOT L18
L28 669 SEA FILE=REGISTRY ABB=ON PLU=ON L27 AND (L23 OR L24)
L29 21 SEA FILE=REGISTRY ABB=ON PLU=ON L3 AND (L23 OR L24)
L30 669 SEA FILE=REGISTRY ABB=ON PLU=ON (L28 OR L29)
L31 226 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (L) L20
L36 2255 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L17) (L) L20
L37 27352 SEA FILE=HCAPLUS ABB=ON PLU=ON ?NICOTINAMID?/BI
L38 5 SEA FILE=HCAPLUS ABB=ON PLU=ON ?NICATINAMID?/BI
L39 99387 SEA FILE=HCAPLUS ABB=ON PLU=ON ?CREATIN?/BI
L41 4550 SEA FILE=HCAPLUS ABB=ON PLU=ON ((L37 OR L38 OR L39)) (L) L20

L42 79 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND L41
L43 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L31

=> d stat que L55
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 SCR 2040
L3 389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8 STR



Structure attributes must be viewed using STN Express query preparation.
L10 24561 SEA FILE=REGISTRY SSS FUL L8
L15 STR

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 13:22:25 ON 01 SEP 2006
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'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d stat que L43
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L2 SCR 2040
L3 389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8 STR

Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 57-60-3 (**PYRUVATE**)
9000-83-3 (ATPASE)
4813-50-7 (BUTYLHYDROPEROXIDE)

L101 ANSWER 34 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1989:44247 BIOSIS
DOCUMENT NUMBER: PREV198936021564; BR36:21564
TITLE: PARALLEL INCREASES IN INOTROPISM AND CYTOSOLIC PHOSPHORYLATION POTENTIAL BY EXCESS **PYRUVATE** PYR IN ISOLATED WORKING GUINEA-PIG HEART.
AUTHOR(S): MALLET R T [Reprint author]; HARTMAN D A; **BUNGER R**
CORPORATE SOURCE: DEP PHYSIOL, USUHS, BETHSEDA, MD 20814-4799, USA
SOURCE: Journal of Molecular and Cellular Cardiology, (1988) Vol. 20, No. SUPPL. 3, pp. S21.
Meeting Info.: XTH ANNUAL MEETING OF THE INTERNATIONAL SOCIETY FOR HEART RESEARCH, WILLIAMSBURG, VIRGINIA, USA, JUNE 26-29, 1988. J MOL CELL CARDIOL.
CODEN: JMCDAY. ISSN: 0022-2828.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 27 Dec 1988
Last Updated on STN: 27 Dec 1988
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Minerals 10069
Biophysics - Bioenergetics: electron transport and oxidative phosphorylation 10510
Metabolism - General metabolism and metabolic pathways 13002
Metabolism - Energy and respiratory metabolism 13003
Metabolism - Minerals 13010
Cardiovascular system - Physiology and biochemistry 14504
INDEX TERMS: Major Concepts
Cardiovascular System (Transport and Circulation); Cell Biology; Metabolism
INDEX TERMS: Miscellaneous Descriptors
ABSTRACT **CALCIUM** REDOX STATE
ORGANISM: Classifier
Caviidae 86300
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 57-60-3 (**PYRUVATE**)
7440-70-2 (**CALCIUM**)

=>

=> file registry
FILE 'REGISTRY' ENTERED AT 13:22:19 ON 01 SEP 2006

STRUCTURE/TEXT SEARCH

```
=> => file registry
FILE 'REGISTRY' ENTERED AT 13:18:31 ON 01 SEP 2006
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DICTIONARY FILE UPDATES:  30 AUG 2006  HIGHEST RN 905475-39-0

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REGISTRY includes numerically searchable data for experimental and
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=> file hcaplus
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FILE LAST UPDATED: 31 Aug 2006  (20060831/ED)

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'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d stat que L76
L74          46 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BUNGER R?/AU
L75        1172 SEA FILE=HCAPLUS ABB=ON  PLU=ON  VERMA A?/AU
L76           2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L74 AND L75


=> d stat que L83
L1              STR
```
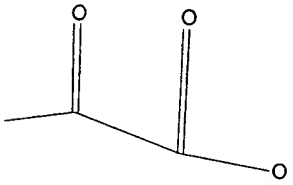

AUTHOR SEARCH

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L2 SCR 2040
L3 389 SEA FILE=REGISTRY SSS FUL L1 AND L2
L8 STR



Structure attributes must be viewed using STN Express query preparation.

L10 24561 SEA FILE=REGISTRY SSS FUL L8
L15 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L17 7632 SEA FILE=REGISTRY SUB=L10 SSS FUL L15
L18 6003 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND NC=1
L20 QUE ABB=ON PLU=ON (THU OR BAC OR PKT OR PAC OR DMA)/RL
L23 549863 SEA FILE=REGISTRY ABB=ON PLU=ON A1/PG
L24 346070 SEA FILE=REGISTRY ABB=ON PLU=ON A2/PG
L27 1629 SEA FILE=REGISTRY ABB=ON PLU=ON L17 NOT L18
L28 669 SEA FILE=REGISTRY ABB=ON PLU=ON L27 AND (L23 OR L24)
L29 21 SEA FILE=REGISTRY ABB=ON PLU=ON L3 AND (L23 OR L24)
L30 669 SEA FILE=REGISTRY ABB=ON PLU=ON (L28 OR L29)
L31 226 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (L) L20
L36 2255 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L17) (L) L20
L37 27352 SEA FILE=HCAPLUS ABB=ON PLU=ON ?NICOTINAMID?/BI
L38 5 SEA FILE=HCAPLUS ABB=ON PLU=ON ?NICATINAMID?/BI
L39 99387 SEA FILE=HCAPLUS ABB=ON PLU=ON ?CREATIN?/BI
L41 4550 SEA FILE=HCAPLUS ABB=ON PLU=ON ((L37 OR L38 OR L39)) (L) L20

L42 79 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND L41
L43 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L31
L50 1 SEA FILE=REGISTRY ABB=ON PLU=ON CREATINE/CN
L51 1 SEA FILE=REGISTRY ABB=ON PLU=ON NICOTINAMIDE/CN
L54 2023 SEA FILE=HCAPLUS ABB=ON PLU=ON ((L50 OR L51)) (L) L20
L55 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L54 AND L31
L56 194670 SEA FILE=HCAPLUS ABB=ON PLU=ON ?PHOSPHORYLAT?/BI
L57 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 AND L56
L58 104 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND L56
L59 QUE ABB=ON PLU=ON SALT#/BI
L60 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L58 AND L59
L63 QUE ABB=ON PLU=ON (?VIRAL? OR ?BACTER? OR ?FUNGAL? OR ?FUNGI? OR ?PARASIT? OR HIV OR AIDS OR ALZHEIM? OR ?DEMENTIA? OR ?ANGIOGEN? OR ?CANCER? OR ?CARCINO? OR ?NEOPLAS? OR ?TUMOR? OR ?APHTHOUS ULCER? OR ?ASTHMA? OR ATOPIC DERMATIT? OR ?PSORIA?)/OBI
L64 65 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 AND L63
L65 QUE ABB=ON PLU=ON (BENIGN PROSTAT? HYPERTROPH?/OBI OR BLOOD SUBSTITUT?/OBI OR BREAST CANCER/OBI OR ?CACHEXIA?/OBI OR ?PNEUMONIA?/OBI OR STD#/OBI OR SEXUAL? TRANSMIT?/OB

```
                I OR CANDIDA ALBICIAN?/OBI OR PARKINSON?/OBI OR PENTUMORA
                L BRAIN EDEM?/OBI OR (RAGWEED/OBI (3A) ?ALLERG?/OBI))
L66             8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L65
L67               QUE  ABB=ON  PLU=ON  RENAL DISEAS?/OBI OR KIDNEY DISEAS?/
                  OBI OR RESTENOSIS/OBI OR ?RHEUMATOID?/OBI OR ALLERG?/OBI
                  OR ROTAVIRUS/OBI OR SEPTIC SHOCK/OBI OR ?TUMOR?/OBI OR ?T
                  UMOUR?/OBI OR STROKE/OBI OR ?THROMBOSIS?/OBI OR ?DIABET?/
                  OBI
L68            28 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 AND L67
L71               QUE  ABB=ON  PLU=ON  VISCER? LEISHMAN?/OBI OR MALARIA/OBI
                   OR PERIODONTAL DISEAS?/OBI OR GUM DISEAS?/OBI OR CNS DIS
                  ORD?/OBI OR CERVICAL DYSTOM?/OBI OR SPASM? TORTICOL?/OBI
                  OR CHORID? NEOVASCULAR/OBI OR HEPATITIS/OBI OR COLITIS/OB
                  I OR CYSTIC FIBROSIS/OBI
L72             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L71 AND L31
L74            46 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BUNGER R?/AU
L75          1172 SEA FILE=HCAPLUS ABB=ON  PLU=ON  VERMA A?/AU
L78            34 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 (L) FFD/RL
L79            18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L78 AND L31
L81           104 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 OR L55 OR L57 OR L60 OR
                  L64 OR L66 OR L68 OR L72 OR L79
L83             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L81 AND (L74 OR L75)


=> s L76 or L83
L100            5 L76 OR L83

=> file medline embase biosis
FILE 'MEDLINE' ENTERED AT 13:19:26 ON 01 SEP 2006

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=> L98
L98 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognised by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d stat que L98
L86           229 SEA BUNGER R?/AU
L87          2397 SEA VERMA A?/AU
L89        116518 SEA ?PYRUVAT?
L92            11 SEA (L86 OR L87) AND L89 AND SODIUM
L93             4 SEA (L86 OR L87) AND L89 AND POTASSIUM
L94             3 SEA (L86 OR L87) AND L89 AND MAGNESIUM
L95            25 SEA (L86 OR L87) AND L89 AND CALCIUM
L98            41 SEA (L92 OR L93 OR L94 OR L95)


=> file wpix
FILE 'WPIX' ENTERED AT 13:19:46 ON 01 SEP 2006
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FILE LAST UPDATED:          25 AUG 2006      <20060825/UP>
MOST RECENT DERWENT UPDATE:     200655        <200655/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE
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http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
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=> d stat que L99
L86          229 SEA BUNGER R?/AU
L87         2397 SEA VERMA A?/AU
L89       116518 SEA ?PYRUVAT?
L91            0 SEA (L86 OR L87) AND L89 AND SALT
L92           11 SEA (L86 OR L87) AND L89 AND SODIUM
L93            4 SEA (L86 OR L87) AND L89 AND POTASSIUM
L94            3 SEA (L86 OR L87) AND L89 AND MAGNESIUM
L95           25 SEA (L86 OR L87) AND L89 AND CALCIUM
L96            0 SEA (L86 OR L87) AND L89 AND LITHIUM
L97            0 SEA (L86 OR L87) AND L89 AND BARIUM
L99            4 SEA FILE=WPIX ABB=ON  PLU=ON  (L91 OR L92 OR L93 OR L94 OR L95
                 OR L96 OR L97)


=> => dup rem L100 L98 L99
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PROCESSING COMPLETED FOR L99
L101          34 DUP REM L100 L98 L99 (16 DUPLICATES REMOVED)
                 ANSWERS '1-5' FROM FILE HCAPLUS
                 ANSWERS '6-18' FROM FILE MEDLINE
                 ANSWERS '19-24' FROM FILE EMBASE
                 ANSWERS '25-34' FROM FILE BIOSIS

=> d ibib abs hitind hitstr L101 1-5; d iall L101  6-34

L101 ANSWER 1 OF 34  HCAPLUS  COPYRIGHT 2006 ACS on STN DUPLICATE 2
```

ACCESSION NUMBER: 2004:609932 HCAPLUS
DOCUMENT NUMBER: 141:145710
TITLE: Cellular **phosphorylation** potential enhancing compositions comprising a **salt** of an α-keto carboxylic acid
INVENTOR(S): **Bunger, Rolf; Verma, Ajay**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 34 pp., Cont.-in-part of U.S. Ser. No. 828,589, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004147604	A1	20040729	US 2003-643080	20030819
US 5536751	A	19960716	US 1994-239635	19940509
US 5714515	A	19980203	US 1996-646572	19960508
PRIORITY APPLN. INFO.:			US 1994-239635	A3 19940509
			US 1996-643284	B1 19960508
			US 1996-646572	A2 19960508
			US 1997-999767	B2 19971027
			US 2000-550047	B2 20000414
			US 2001-828589	B2 20010409

AB A pharmaceutical composition comprising, as an active **phosphorylation** potential enhancing, substance a pharmaceutically-acceptable **salt** of an α-keto carboxylic acid thereof alone or in combination with nicotinamide and creatine and, its use and products containing the same are described.

IC ICM A61K031-202
ICS A61K031-198
INCL 514558000; 514565000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 17
ST keto carboxylate **salt** nicotinamide creatine **phosphorylation** cytoprotectant
IT Beverages
Cytoprotective agents
Drug delivery systems
Energy metabolism, animal
Food
Nutrients
Phosphorylation, biological
(compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)
IT Amino acids, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)
IT Cytoprotective agents
Nervous system agents
(neuroprotective agents; compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)
IT Carboxylic acids, biological studies

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxo, **salts**, alkali or alkaline earth metal; compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)

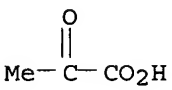
IT Carboxylic acids, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**salts**, α-keto, alkali or alkaline earth metals; compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)

IT Drug interactions
(synergistic; compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)

IT 57-00-1, Creatine 98-92-0, Nicotinamide **127-17-3D**, Pyruvic acid, **salts**
RL: FFD (Food or feed use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)

IT **127-17-3D**, Pyruvic acid, **salts**
RL: FFD (Food or feed use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. containing **salt** of α-keto carboxylic acid in combination with nicotinamide and creatine for enhancing cellular **phosphorylation** potential)

RN 127-17-3 HCAPLUS
CN Propanoic acid, 2-oxo- (9CI) (CA INDEX NAME)



L101 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 1999:297294 HCAPLUS
DOCUMENT NUMBER: 130:342992
TITLE: Novel pharmaceutical α-keto carboxylic acid compositions, method of making and use thereof
INVENTOR(S): **Bunger, Rolf**
PATENT ASSIGNEE(S): United States Dept. of the Army, USA
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9921544	A1	19990506	WO 1998-US16141	19980803

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,

NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9887663 A1 19990517 AU 1998-87663 19980803
PRIORITY APPLN. INFO.: US 1997-999767 A 19971027
WO 1998-US16141 W 19980803

OTHER SOURCE(S): MARPAT 130:342992

AB Disclosed are a pharmaceutical composition comprising an α-keto carboxylic acid or a pharmaceutically-acceptable **salt** thereof as an active **phosphorylation** potential enhancing substance, its use and products containing the same. For example, an injectable antibiotic augmented with a pyruvate contained ceftriaxone sodium 250 mg, water 0.9 mL, and Na pyruvate 0.5 mg.

IC ICM A61K031-19
ICS A61K031-20

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 18, 62

ST oxo carboxylate **phosphorylation** enhancer; pyruvate **phosphorylation** cell function restoration

IT Lung, disease
(bronchopulmonary dysplasia, treatment of; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Antibiotics
(co-administration with; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Vitamins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(co-administration with; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Respiratory tract
(disease, treatment of; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Blood vessel
(endothelium, perfusion to; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Exercise
(endurance, enhancement in; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Radicals, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(formation inhibition in; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Animal cell
(function restoration in; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Dialysis
(hemodialysis, solns.; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Drug delivery systems
(injections, i.m.; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Solutions
(isotonic solns.; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Drug delivery systems

(ointments; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents in topical prepns.)

IT Carboxylic acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxo, **salts**; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Nutrition, animal
(parenteral, total; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Bakery products
(pastries; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents in refreshments)

IT Artery
Brain
Gland
Heart
Kidney
Liver
Pancreas
Spleen
(perfusion to; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Dialysis
(peritoneal, solns.; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Hydration, physiological
(rehydration; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Drug delivery systems
(solns., cardioplegic; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Drug delivery systems
(sprays; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Drug delivery systems
(topical; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Acidosis
Skin, disease
(treatment of; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Animal tissue culture
Antiasthmatics
Blood substitutes
Dialysis fluids
Electrolytes
Phosphorylation, biological
Physiological saline solutions
(use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT Beverages
Candy
Confectionery
(use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents in refreshments)

IT Bath preparations
Dentifrices
Mouthwashes

Shampoos
Sunscreens
(use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents in topical prepns.)

IT Soaps
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents in topical prepns.)

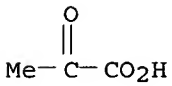
IT 51-30-9, Isoproterenol hydrochloride 55-31-2, Epinephrine hydrochloride 59-43-8, Thiamine, biological studies 74578-69-1, Ceftriaxone sodium
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(co-administration with; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT 7722-84-1, Hydrogen peroxide (H2O2), biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(neutralization of; use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(use of α-keto carboxylic acid compns. as **phosphorylation** potential enhancing agents)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 1997:740439 HCAPLUS
DOCUMENT NUMBER: 128:39551
TITLE: Pharmaceutical compositions containing α-ketocarboxylates
INVENTOR(S): **Bunger, Rolf**
PATENT ASSIGNEE(S): United States Dept. of the Army, USA
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9741848	A1	19971113	WO 1996-US11434	19960712
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9664860	A1	19971126	AU 1996-64860	19960712
PRIORITY APPLN. INFO.:			US 1996-643284 A	19960508
			WO 1996-US11434 W	19960712

OTHER SOURCE(S): MARPAT 128:39551

AB Disclosed are novel pharmaceutical compns. comprising as an active **phosphorylation** potential-enhancing substance, a pharmaceutically acceptable **salt** of an α-ketocarboxylic acid, method of making and use thereof. The α-ketocarboxylates are effective in protecting and restoring normal cell functions. An i.v. Ringer's lactate augmented with pyruvate contained NaCl 600, KCl 30, Na lactate 310, Na pyruvate 310, CaCl2 20 mg, and purified water to 100 mL.

IC ICM A61K031-19
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 18, 62
ST ketocarboxylate **phosphorylation** potential enhancer cell function
IT Named reagents and solutions
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Krebs-Henseleit; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Named reagents and solutions
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Ringer's; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Lung, disease
(bronchopulmonary dysplasia; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Respiratory tract
(disease; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Bath preparations
(douches; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Beverages
(electrolyte-containing; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Dialysis
(hemodialysis, solns. for; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Drug delivery systems
(injections, i.m.; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Food
(low-calorie; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
IT Drug delivery systems

(ointments; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Carboxylic acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxo; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Bakery products
(pastries; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Dialysis
(peritoneal, solns. for; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Hydration, physiological
(rehydration, solns. for; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Organ preservation
Perfusion
(solns. for; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Drug delivery systems
(solns., cardioplegic; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Drug delivery systems
(sprays; α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

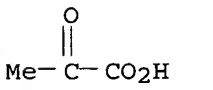
IT Acidosis
Anti-inflammatory agents
Antibiotics
Asthma
Bath preparations
Blood substitutes
Breakfast cereal
Candy
Culture media
Dentifrices
Mouthwashes
Phosphorylation, biological
Physiological saline solutions
Shampoos
Skin, disease
Sunscreens
(α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Vitamins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT Soaps
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(α-ketocarboxylates for protecting cell functions by enhancing

phosphorylation potential)
IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(α-ketocarboxylates for protecting cell functions by enhancing **phosphorylation** potential)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



L101 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7
ACCESSION NUMBER: 1996:469935 HCAPLUS
DOCUMENT NUMBER: 125:123773
TITLE: Pharmaceutical α-keto carboxylic acid compositions, method of making, and use thereof
INVENTOR(S): **Bunger, Rolf**
PATENT ASSIGNEE(S): United States Dept. of the Army, USA
SOURCE: U.S., 13 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

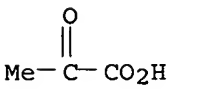
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5536751	A	19960716	US 1994-239635	19940509
US 5714515	A	19980203	US 1996-646572	19960508
US 2004147604	A1	20040729	US 2003-643080	20030819
PRIORITY APPLN. INFO.:			US 1994-239635 A3	19940509
			US 1996-643284 B1	19960508
			US 1996-646572 A2	19960508
			US 1997-999767 B2	19971027
			US 2000-550047 B2	20000414
			US 2001-828589 B2	20010409

AB A pharmaceutical composition comprises an α-keto carboxylic acid as an active **phosphorylation** potential enhancing substance to prevent the deterioration or promote the restoration and preservation of normal cell functions. For example, an injected antibiotic solution was augmented with pyruvate to contain ceftriaxone Na 250, Na pyruvate 0.5 mg, and water 0.9 mL.
IC ICM A61K031-19
ICS A61K031-20
INCL 514557000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU

(Biological study, unclassified); **THU (Therapeutic use)**; BIOL
(Biological study); USES (Uses)
(α-keto carboxylic acids for restoration of normal cell functions)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU
(Biological study, unclassified); **THU (Therapeutic use)**; BIOL
(Biological study); USES (Uses)
(α-keto carboxylic acids for restoration of normal cell functions)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



L101 ANSWER 5 OF 34 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:784172 HCAPLUS
DOCUMENT NUMBER: 134:308256
TITLE: Nitric oxide: mechanism of action
AUTHOR(S): Muldoon, S. M.; **Verma, A.**; Jing, M.; **Bunger, R.**
CORPORATE SOURCE: Departments of Anesthesiology and Physiology, Uniformed Services University of the Health Sciences, Bethesda, MD, USA
SOURCE: Molecular Pharmacology of Anaesthesia, [Symposium], Hamburg, Germany, July 9-10, 1998 (2000), Meeting Date 1998, 274-282. Editor(s): Schulte am Esch, Jochen; Scholz, Jens; Tonner, Peter H. Pabst Science Publishers: Lengerich, Germany.
CODEN: 69APTX
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 15 refs. Topics discussed include its formation by nitric oxide synthase; the measurement of nitric oxide in biol. fluids; the physiol. aspects of nitric oxide; and the relation between halothane and nitric oxide.
CC 13-0 (Mammalian Biochemistry)
Section cross-reference(s): 1
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 6 OF 34 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006095668 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16394695
TITLE: Effects of caffeine, halothane, and 4-chloro-m-cresol on skeletal muscle lactate and **pyruvate** in malignant hyperthermia-susceptible and normal swine as assessed by microdialysis.

AUTHOR: Bina Saiid; Cowan George; Karaian John; Muldoon Sheila; Mongan Paul; **Bunger Rolf**
CORPORATE SOURCE: Department of Anesthesiology, Uniformed Services University of the Health Sciences, Bethesda, Maryland 20814, USA.. sbina@usuhs.mil
SOURCE: Anesthesiology, (2006 Jan) Vol. 104, No. 1, pp. 90-100. Journal code: 1300217. ISSN: 0003-3022.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200603
ENTRY DATE: Entered STN: 18 Feb 2006
Last Updated on STN: 7 Mar 2006
Entered Medline: 6 Mar 2006

ABSTRACT:
BACKGROUND: Skeletal muscle fibers from malignant hyperthermia (MH)-susceptible humans and swine are markedly more sensitive to ryanodine receptor (RyR1) agonists than those from normal individuals. Reproducible shifts in the dose-response of skeletal muscle to caffeine and halothane are the basis of the current in vitro diagnostic caffeine-halothane contracture test. In an attempt to develop a less invasive MH diagnostic test, the authors determined the effects of RyR1 agonists (caffeine, 4-chloro-m-cresol [4CmC], and halothane) on the adductor muscle with respect to the lactate-**pyruvate** (L/P) system that was percutaneously dialyzed using a microdialysis technique in homozygous MH-susceptible compared with normal swine. METHODS: Animals were anesthetized (ketamine-propofol) and artificially ventilated. Sets of six CMA/20 microdialysis catheters were implanted; each catheter was perfused with different RyR1 agonist concentrations. After a 30-min equilibration after implantation, one of the catheters was perfused (2 microl/min) with vehicle (0.9% saline or lipid emulsion), and the other five were perfused with caffeine (1-64 mM), 4CmC (0.1-8 mM), or halothane (prepared in lipid emulsion; 10-500 mM). Outflow dialysate fractions collected at 10-min intervals and L/P parameters were measured enzymatically. RESULTS: Only in the MH-susceptible group did all RyR1 agonists increase dialysate L/P in a dose-dependent manner. The dose-effect relations were most prominent with 4CmC. With the halothane lipid emulsion, data scatter was high compared with that of the caffeine group and especially the 4CmC group. There were no signs of global muscle rigidity, systemic hypermetabolism, or a clinical MH episode during microdialysis RyR1 perfusion. CONCLUSIONS: The authors data demonstrate that the in vivo muscle microdialysis of the porcine L/P system reveals distinct differences between MH-susceptible and MH-normal muscle, especially in response to highly specific RyR1 agonists such as 4CmC. The microdialysis L/P technique seems to have an MH diagnostic potential in the clinical setting.

CONTROLLED TERM:
Anesthesia, General
Anesthetics, Dissociative
*Anesthetics, Inhalation: PD, pharmacology
Anesthetics, Intravenous
Animals
Blood Gas Analysis
*Caffeine: PD, pharmacology
*Central Nervous System Stimulants: PD, pharmacology
Creatine Kinase: BL, blood
*Cresols: PD, pharmacology
Dose-Response Relationship, Drug
Electrolytes: ME, metabolism
Glucose: ME, metabolism
*Halothane: PD, pharmacology
Ketamine
*Lactic Acid: ME, metabolism

Malignant Hyperthermia: GE, genetics
*Malignant Hyperthermia: ME, metabolism
Microdialysis
Muscle, Skeletal: DE, drug effects
*Muscle, Skeletal: ME, metabolism
Propofol
*Pyruvic Acid: ME, metabolism
Research Support, Non-U.S. Gov't
Ryanodine Receptor Calcium Release Channel: DE, drug effects
Swine

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid); 151-67-7 (Halothane); 2078-54-8 (Propofol); 50-21-5 (Lactic Acid); 50-99-7 (Glucose); 58-08-2 (Caffeine); 59-50-7 (chlorocresol); 6740-88-1 (Ketamine)

CHEMICAL NAME: 0 (Anesthetics, Dissociative); 0 (Anesthetics, Inhalation); 0 (Anesthetics, Intravenous); 0 (Central Nervous System Stimulants); 0 (Cresols); 0 (Electrolytes); 0 (Ryanodine Receptor **Calcium** Release Channel); EC 2.7.3.2 (Creatine Kinase)

L101 ANSWER 7 OF 34 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2001402767 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11454591
TITLE: **Pyruvate** improves cerebral metabolism during hemorrhagic shock.
AUTHOR: Mongan P D; Capacchione J; Fontana J L; West S; **Bunger R**
CORPORATE SOURCE: Department of Anesthesiology, Uniformed Services University of the Health Sciences, Bethesda, Maryland 20814, USA.. pmongan@usuhs.mil
SOURCE: American journal of physiology. Heart and circulatory physiology, (2001 Aug) Vol. 281, No. 2, pp. H854-64. Journal code: 100901228. ISSN: 0363-6135.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200108
ENTRY DATE: Entered STN: 20 Aug 2001
Last Updated on STN: 20 Aug 2001
Entered Medline: 16 Aug 2001

ABSTRACT:
Pyruvate (PYR) improves cellular and organ function hypoxia and ischemia by stabilizing the reduced nicotinamide adenine dinucleotide redox state and cytosolic ATP phosphorylation potential. In this in vivo study, we evaluated the effects of intravenous **pyruvate** on neocortical function, indexes of the cytosolic redox state, cellular energy state, and ischemia during a prolonged (4 h) controlled arterial hemorrhage (40 mmHg) in swine. Thirty minutes after the onset of hemorrhagic shock, **sodium** PYR (n = 8) was infused (0.5 g x kg(-1) x h(-1)) to attain arterial levels of 5 mM. The volume and osmotic effects were matched with 10% NaCl [hypertonic saline (HTS)] (n = 8) or 0.9% NaCl [normal saline (NS)] (n = 8). During the hemorrhage protocol, the time to peak hemorrhage volume was significantly delayed in the PYR group compared with the HTS and NS groups (94 +/- 5 vs. 73 +/- 6 and 72 +/- 4 min, P < 0.05). In addition to the early onset of the decompensatory phase of hemorrhagic shock, the complete return of the hemorrhage volume during decompensatory shock resulted in the death of five and four animals, respectively, in the HTS and NS groups. In contrast, in the PYR group, reinfusion of the hemorrhage volume was slower and all animals survived

the 4-h hemorrhage protocol. During hemorrhage, the PYR group also exhibited improved cerebral cortical metabolic and function status. PYR slowed and reduced the rise in neocortical microdialysis levels of adenosine, inosine, and hypoxanthine and delayed the loss of cerebral cortical biopsy ATP and phosphocreatine content. This improvement in energetic status was evident in the improved preservation of the electrocorticogram in the PYR group. PYR also prevented the eightfold increase in the excitotoxic amino acid glutamate observed in the HTS group. The findings show that PYR administered after the onset of hemorrhagic shock markedly improves cerebral metabolic and functional status for at least 4 h.

CONTROLLED TERM: Animals
*Brain: ME, metabolism
Brain Ischemia: DT, drug therapy
Energy Metabolism: DE, drug effects
Oxidation-Reduction
*Pyruvic Acid: PD, pharmacology
Pyruvic Acid: TU, therapeutic use
Research Support, U.S. Gov't, Non-P.H.S.
Shock, Hemorrhagic: DT, drug therapy
*Shock, Hemorrhagic: ME, metabolism
Shock, Hemorrhagic: PP, physiopathology
Swine

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid)

L101 ANSWER 8 OF 34 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 1998120467 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9458846
TITLE: **Pyruvate** augments **calcium** transients and cell shortening in rat ventricular myocytes.
AUTHOR: Martin B J; Valdivia H H; **Bunger R**; Lasley R D; Mentzer R M Jr
CORPORATE SOURCE: Division of Cardiothoracic Surgery, University of Wisconsin School of Medicine, Madison 53792-0001, USA.
CONTRACT NUMBER: HL-09250-02 (NHLBI)
R01 HL-34579 (NHLBI)
SOURCE: The American journal of physiology, (1998 Jan) Vol. 274, No. 1 Pt 2, pp. H8-17.
Journal code: 0370511. ISSN: 0002-9513.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199802
ENTRY DATE: Entered STN: 6 Mar 1998
Last Updated on STN: 6 Mar 1998
Entered Medline: 23 Feb 1998

ABSTRACT:
Pyruvate has been shown to be a metabolic inotrope in the myocardium. In millimolar concentrations, it has been shown to increase both myocardial phosphorylation potential and the cytosolic [NAD+]-to-[NADH] ratio. To determine if changes in these parameters can alter intracellular Ca2+ concentration ([Ca2+]i) and hence contractile function, Ca2+ transients and cell shortening (CS) were measured in isolated rat ventricular myocytes superfused with a physiological N-2-hydroxyethylpiperazine-N'-2-ethanesulfonic acid buffer (11 mmol/l glucose) with and without additional **pyruvate**, L-lactate, acetate, or isoproterenol. The addition of 5 mmol/l ***pyruvate*** resulted in a 33% increase in CS and a 39% increase in systolic [Ca2+]i. These **pyruvate** effects were 70% of those observed with 100 nmol/l isoproterenol. The mitochondrial monocarboxylate transport inhibitor alpha-cyano-4-hydroxycinnamate (250 mumol/l) strongly inhibited

pyruvate inotropy, suggesting a substantial obligatory coupling between ***pyruvate*** inotropism and its oxidation by the mitochondria. A possible role of the cytosolic [NAD+]-to-[NADH] ratio was assessed by comparing the effects of 20 mmol/l L-lactate to those of equimolar **pyruvate.** In contrast to 20 mmol/l **pyruvate**, excess L-lactate failed to appreciably increase CS or systolic [Ca2+]i. The findings imply that, at levels substantially above 5 mmol/l, a portion of **pyruvate** inotropism might be due to extreme cytosolic [NAD+]-to-[NADH] ratios. This study is the first evidence that augmented [Ca2+]i transients are most likely the mechanism of cardiac **pyruvate** inotropism.

CONTROLLED TERM: Check Tags: Male
Animals
Calcium: ME, metabolism
Cells, Cultured
Comparative Study
Cytosol: ME, metabolism
Glucose: ME, metabolism
Glucose: PD, pharmacology
*Heart: PH, physiology
Heart Ventricles
Lactic Acid: PD, pharmacology
Mitochondria, Heart: ME, metabolism
Models, Cardiovascular
*Myocardial Contraction: DE, drug effects
Myocardium: CY, cytology
*Myocardium: ME, metabolism
NAD: ME, metabolism
NADP: ME, metabolism
Phosphorylation
*Pyruvic Acid: PD, pharmacology
Rats
Rats, Wistar
Research Support, U.S. Gov't, P.H.S.

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid); 50-21-5 (Lactic Acid); 50-99-7 (Glucose); 53-59-8 (NADP); 53-84-9 (NAD); **7440-70-2 (Calcium)**

L101 ANSWER 9 OF 34 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 94348210 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8069038
TITLE: Metabolically based treatment of stunned myocardium.
AUTHOR: Lasley R D; **Bunger R**; Zhou Z; Mentzer R M Jr
CORPORATE SOURCE: Department of Surgery, University of Wisconsin, Madison.
SOURCE: Journal of cardiac surgery, (1994 May) Vol. 9, No. 3 Suppl, pp. 469-73.
Journal code: 8908809. ISSN: 0886-0440.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199409
ENTRY DATE: Entered STN: 6 Oct 1994
Last Updated on STN: 6 Oct 1994
Entered Medline: 29 Sep 1994

ABSTRACT:
Reversible myocardial ischemia is associated with a rapid decrease in contractility and prolonged postischemic ventricular dysfunction, due in part to altered intracellular **calcium** handling and/or contractile protein dysfunction. The maintenance of intracellular **calcium** homeostasis and force development by the contractile apparatus are dependent upon the free

energy derived from ATP hydrolysis. This energy of hydrolysis is determined by the myocardial phosphorylation potential, an estimate of which can be made from the ratio (CrP)/(Cr) x (P(i)). Results from in vitro and in vivo studies suggest that **pyruvate** enhances contractility in both normal and stunned myocardium by enhancing myocardial phosphorylation potential. In regionally stunned porcine myocardium, **pyruvate** infusion increased recovery of regional ventricular function from 33% +/- 4% of preischemic systolic wall thickening to 81% +/- 4% and increased the (CrP)/(Cr) x (P(i)) ratio fivefold from 0.21 +/- 0.04 to 1.05 +/- 0.08. Thus, metabolic substrates that enhance myocardial energetics and ventricular function may be effective agents for attenuating postischemic ventricular function.

CONTROLLED TERM: Animals
Humans
Myocardial Contraction: DE, drug effects
*Myocardial Stunning: DT, drug therapy
*Myocardial Stunning: ME, metabolism
*Myocardium: ME, metabolism
Phosphorylation
Pyruvates: PD, pharmacology
***Pyruvates: TU, therapeutic use**
Pyruvic Acid
Ventricular Function: DE, drug effects

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid)
CHEMICAL NAME: 0 (**Pyruvates**)

L101 ANSWER 10 OF 34 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 95035117 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7948040
TITLE: Energetic modulation of cardiac inotropism and sarcoplasmic reticular Ca2+ uptake.
AUTHOR: Mallet R T; **Bunger R**
CORPORATE SOURCE: Department of Physiology, University of North Texas Health Science Center, Fort Worth 76107-2699.
CONTRACT NUMBER: R01 HL-36067 (NHLBI)
R29 HL-50441 (NHLBI)
SOURCE: Biochimica et biophysica acta, (1994 Oct 20) Vol. 1224, No. 1, pp. 22-32.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199412
ENTRY DATE: Entered STN: 10 Jan 1995
Last Updated on STN: 10 Jan 1995
Entered Medline: 7 Dec 1994

ABSTRACT:
Myocardial contractile performance is a function of sarcoplasmic reticular Ca2+ uptake and release. Ca2+ handling is ATP-dependent and can account for up to 40% of total myocardial energy expenditure. We tested the hypothesis that the thermodynamics of the cytosolic adenylate system can modulate sarcoplasmic reticular Ca2+ handling and hence function in intact heart. Cellular energy level was experimentally manipulated by perfusing isolated working guinea-pig hearts with substrate-free medium or media fortified with lactate and/or ***pyruvate*** as the main energy substrate. Left ventricular contractile function was judged by stroke work and intraventricular dP/dt. Cytosolic energy level was indexed by measured creatinine kinase reactants. Relative to 5 mM lactate, 5 mM **pyruvate** increased left ventricular stroke work, dP/dtmax, and dP/dtmin, while lowering left ventricular end-diastolic pressure at physiological left atrial and aortic pressures. **Pyruvate** also

doubled cytosolic phosphorylation potentials and increased [ATP]/[ADP] ratio; this energetic enhancement distinguishes **pyruvate** from inotropic stimulation by catecholamines, which are known to decrease cytosolic energy level in perfused heart. Sarcoplasmic reticular Ca2+ handling was assessed in hearts prelabeled with 45Ca, subjected to 45Ca washout in the presence of different cytosolic energy levels, then stimulated with 10 mM caffeine to release residual sarcoplasmic reticular 45Ca. When ryanodine (1 microM) was applied to open Ca2+ channels and thereby released 45Ca from the sarcoplasmic reticulum during washout, caffeine-stimulated 45Ca release was decreased 96%, demonstrating that virtually the entire caffeine-sensitive 45Ca pool was located in the sarcoplasmic reticulum. In detailed comparisons of ***pyruvate*** -energized vs. substrate-free deenergized hearts, an inverse relationship between cytosolic energy level and caffeine-mobilized 45Ca pool size was observed. Thus, caffeine-induced 45Ca release was decreased 60% by ***pyruvate*** energization and increased 2.5-fold by substrate-free deenergization. Taken together, these results support the hypothesis that enhancement of myocardial inotropism by energy-yielding substrate is mediated by increased sarcoplasmic reticular Ca2+ loading/release. Thus we propose that the known control of sarcoplasmic reticular Ca2+ turnover by the protein kinase/phospholamban system can be modulated by cytosolic energy level.

CONTROLLED TERM: Check Tags: Male
Animals
Caffeine: PD, pharmacology
***Calcium: ME, metabolism**
Calcium Radioisotopes
Energy Metabolism
Guinea Pigs
In Vitro
Lactates: PD, pharmacology
Lactic Acid
*Myocardial Contraction: PH, physiology
Phosphorylation
Pyruvates: PD, pharmacology
Pyruvic Acid
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, Non-P.H.S.
Research Support, U.S. Gov't, P.H.S.
Ryanodine: PD, pharmacology
*Sarcoplasmic Reticulum: ME, metabolism
Ventricular Function, Left: DE, drug effects

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid); 15662-33-6 (Ryanodine); 50-21-5 (Lactic Acid); 58-08-2 (Caffeine); **7440-70-2 (Calcium)**

CHEMICAL NAME: 0 (**Calcium** Radioisotopes); 0 (Lactates); 0 (**Pyruvates**)

L101 ANSWER 11 OF 34 MEDLINE on STN DUPLICATE 10

ACCESSION NUMBER: 93385145 MEDLINE

DOCUMENT NUMBER: PubMed ID: 8104034

TITLE: Mitochondrial **pyruvate** transport in working guinea-pig heart. Work-related vs. carrier-mediated control of **pyruvate** oxidation.

AUTHOR: **Bunger R**; Mallet R T

CORPORATE SOURCE: Department of Physiology, F.E. Hebert School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, MD 20814-4799.

CONTRACT NUMBER: R01 HL-37067 (NHLBI)

SOURCE: Biochimica et biophysica acta, (1993 Sep 19) Vol. 1151, No. 2, pp. 223-36.
Journal code: 0217513. ISSN: 0006-3002.

PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199310
ENTRY DATE: Entered STN: 5 Nov 1993
Last Updated on STN: 3 Feb 1997
Entered Medline: 21 Oct 1993

ABSTRACT:
Myocardial **pyruvate** oxidation is work- or **calcium** -load-related, but control of **pyruvate** dehydrogenase (PDH) by the specific mitochondrial **pyruvate** transporter has also been proposed. To test the transport hypothesis distribution of **pyruvate** across the cell membrane as well as rates of mitochondrial **pyruvate** net transport plus oxidation were examined in isolated perfused but stable and physiologically working guinea-pig hearts. 150 microM-1.2 mM alpha-cyanohydroxycinnamate proved to specifically block mitochondrial ***pyruvate*** uptake in these hearts. When perfusate glucose as cytosolic ***pyruvate*** precursor was supplied in combination with octanoate (0.2 or 0.5 mM) as diffusible alternative fatty acid substrate, alpha-cyanohydroxycinnamate produced up to 20- and 3-fold increases in ***pyruvate*** and lactate efflux, respectively. Cinnamates did not alter myocardial hemodynamics nor sarcolemmal **pyruvate** and lactate export. In contrast the tested concentrations of cinnamate produced reversible, dose-dependent decreases in 14CO2 production from [1-14C]**pyruvate** or [U-14C]glucose by inhibiting mitochondrial **pyruvate** uptake. Linear least-squares estimates of available cinnamate-sensitive total **pyruvate** transport potential yielded rates close to 110 mumol/min per g dry mass at S0.5 approximately 120 microM, which compared reasonably well with literature values from isolated cardiac mitochondria. This transport potential was severalfold larger than total extractable myocardial PDH activity of approximately 32 mumol/min per g dry mass at 37 degrees C. Even when cytosolic **pyruvate** levels were in the lower physiologic range of about 90 microM, **pyruvate** oxidation readily kept pace with mitochondrial respiration over a wide range of workload and inotropism. Furthermore, dichloroacetate, a selective activator of PDH, stimulated **pyruvate** oxidation without affecting myocardial O2 consumption, regardless of the metabolic or inotropic state of the hearts. Consequently, little or no regulatory function with regard to **pyruvate** oxidation could be assigned to the native mitochondrial **pyruvate** carrier of the working heart. Therefore, mitochondrial **pyruvate**-H+ symport was the normal, highly efficient (rather than controlling) mechanism for **pyruvate** entry into the mitochondria where PDH regulation controlled **pyruvate** oxidation.

CONTROLLED TERM: Adrenergic Agonists: PD, pharmacology
Animals
Biological Transport: DE, drug effects
Carbon Radioisotopes
*Carrier Proteins: ME, metabolism
Coumaric Acids: AI, antagonists & inhibitors
Coumaric Acids: PD, pharmacology
Dichloroacetate: PD, pharmacology
Glucose: ME, metabolism
Guinea Pigs
*Heart Ventricles: PH, physiology
Hydrogen-Ion Concentration
Kinetics
*Membrane Transport Proteins
*Mitochondria, Heart: ME, metabolism
Oxidation-Reduction
***Pyruvate Dehydrogenase Complex: ME, metabolism**

***Pyruvates: ME, metabolism**
Pyruvic Acid
Research Support, U.S. Gov't, Non-P.H.S.
Research Support, U.S. Gov't, P.H.S.
Sarcolemma: ME, metabolism

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid); 13425-80-4 (Dichloroacetate); 28166-41-8 (alpha-cyano-4-hydroxycinnamate); 50-99-7 (Glucose)

CHEMICAL NAME: 0 (Adrenergic Agonists); 0 (Carbon Radioisotopes); 0 (Carrier Proteins); 0 (Coumaric Acids); 0 (Membrane Transport Proteins); 0 (**Pyruvate** Dehydrogenase Complex); 0 (**Pyruvates**); 0 (**pyruvate** transport protein)

L101 ANSWER 12 OF 34 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 92329565 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1627662
TITLE: Use of cytosolic metabolite patterns to estimate free **magnesium** in normoxic myocardium.
AUTHOR: Mallet R T; Kang Y H; Mukohara N; **Bunger R**
CORPORATE SOURCE: Department of Physiology, Texas College of Osteopathic Medicine, Fort Worth 76107-2699.
CONTRACT NUMBER: R01 HL-29060 (NHLBI)
R01 HL-37067 (NHLBI)
SOURCE: Biochimica et biophysica acta, (1992 Jul 7) Vol. 1139, No. 3, pp. 239-47.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199208
ENTRY DATE: Entered STN: 4 Sep 1992
Last Updated on STN: 3 Feb 1997
Entered Medline: 18 Aug 1992

ABSTRACT:
Cytosolic free **magnesium** (Mgf) is considered relatively constant. To test this concept, Mgf was estimated during hyperkalemic ventricular akinesis, normal and maximum adrenergic stimulation, and sulfate loading of the normoxic perfused guinea-pig heart. The Mgf estimates utilized a new sliding scale derived from the Mg(2+)-dependence of glyceraldehyde-3-phosphate dehydrogenase/phosphoglycerate kinase (GAPDH/PGK). The pseudo constant K'GAPDH.K'PGK was measured as ([creatine phosphate][3-phosphoglycerate][lactate]KLDH)/([creatine][Pi] [glyceraldehyde 3-phosphate][***pyruvate***]KCK), which varied with **magnesium** due to KCK (CK, LDH = creatine kinase, lactate dehydrogenase). However, the correct ***magnesium*** dependencies of the true constants KGAPDH.KPGK and KCK were taken from the literature. The [Mg2+] at which pseudo K'GAPDH.K'PGK equalled true KGAPDH.KPGK was the best estimate of Mgf.Mgf fell to approximately 0.13 mM in hyperkalemic arrest from a control of approximately 0.6 mM, rising to approximately 0.85 mM only during maximum adrenergic stress. Mgf increased further to approximately 1.3 mM during sulfate loading which induced ATP catabolism. Mgf and ATP were reciprocally related. Thus; (1) myocardial free [Mg2+] judged from GADPH/PGK mass-action relations changed appreciably only under extreme physiological states; (2) ATP was a major chelator of Mg2+ in perfused myocardium, i.e., acute ATP pool size reduction may be associated with increments in Mgf.

CONTROLLED TERM: Check Tags: Female; Male
Aconitate Hydratase: ME, metabolism
Adenosine Triphosphate: ME, metabolism

Animals
Cytosol: ME, metabolism
Glycolysis
Guinea Pigs
In Vitro
Kinetics
*Magnesium: ME, metabolism
Myocardial Contraction
*Myocardium: ME, metabolism
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, Non-P.H.S.
Research Support, U.S. Gov't, P.H.S.
Sulfates: ME, metabolism

CAS REGISTRY NO.: 56-65-5 (Adenosine Triphosphate); **7439-95-4 (Magnesium)**
CHEMICAL NAME: 0 (Sulfates); EC 4.2.1.3 (Aconitate Hydratase)

L101 ANSWER 13 OF 34 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 89206332 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2705826
TITLE: Effect of **pyruvate** on regional ventricular function in normal and stunned myocardium.
AUTHOR: Mentzer R M Jr; Van Wylen D G; Sodhi J; Weiss R J; Lasley R D; Willis J; **Bunger R**; Habil; Flint L M
CORPORATE SOURCE: Department of Surgery, School of Medicine and Biomedical Sciences, State University of New York, Buffalo 14215.
CONTRACT NUMBER: HL-01299 (NHLBI)
HL-34579 (NHLBI)
HL-36067 (NHLBI)
+
SOURCE: Annals of surgery, (1989 May) Vol. 209, No. 5, pp. 629-33; discussion 633-4.
Journal code: 0372354. ISSN: 0003-4932.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198905
ENTRY DATE: Entered STN: 6 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 25 May 1989

ABSTRACT:
The prolonged ventricular dysfunction following brief periods of coronary artery occlusion that does not produce irreversible damage has been termed the "stunned" myocardium. Although ventricular function returns to preischemic values by 1 to 7 days after reperfusion is established, inotropic therapy may be necessary to enhance contractility in the stunned heart. The purpose of this study was to determine the effect of **pyruvate** on ventricular function in normal and stunned myocardium. Eight chloralose/urethane anesthetized dogs were instrumented with ultrasonic crystals to measure systolic wall thickening in the left anterior descending artery (LAD) and left circumflex artery perfused regions of the left ventricle. **Pyruvate** (1 ml/min of 150 mM **sodium pyruvate**, pH 7.4) was infused directly into the LAD prior to and 30 minutes after a 10 minute LAD occlusion. Prior to LAD occlusion, LAD **pyruvate** infusion increased systolic wall thickening in the LAD-perfused region from 16.2% +/- 4.3% to 23.4% +/- 5.1% (p less than 0.05). Thirty minutes after LAD occlusion, regional wall thickening was depressed (3.3% +/- 2.6%; p less than 0.05), which is indicative of stunned myocardium. Subsequent LAD **pyruvate** infusion increased wall thickening in the stunned myocardium to 12.7% +/- 2.5%. The improvement of

regional ventricular function was maintained only during the **pyruvate** infusion, as function returned to **prepyruvate** levels within 20 minutes after cessation of **pyruvate** infusion. These data indicate that **pyruvate** exerts a positive inotropic effect in normal and stunned myocardium. If **pyruvate**, a key intermediate in energy-producing pathways, exerts its inotropic effect through an enhancement of the energy state of the heart, it may have advantages over traditional inotropic agents in the treatment of postischemic contractile dysfunction.

CONTROLLED TERM: Check Tags: Female; Male
Animals
Cardiotonic Agents: PD, pharmacology
Dogs
Heart Ventricles: PH, physiology
Hemodynamic Processes
*Myocardial Contraction: DE, drug effects
*Myocardial Reperfusion Injury: PP, physiopathology
***Pyruvates: PD, pharmacology**
Pyruvic Acid
Research Support, U.S. Gov't, P.H.S.

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid)

CHEMICAL NAME: 0 (Cardiotonic Agents); 0 (**Pyruvates**)

L101 ANSWER 14 OF 34 MEDLINE on STN DUPLICATE 13

ACCESSION NUMBER: 83272882 MEDLINE

DOCUMENT NUMBER: PubMed ID: 6878010

TITLE: Energy utilization and **pyruvate** as determinants of **pyruvate** dehydrogenase in norepinephrine-stimulated heart.

AUTHOR: **Bunger R**; Permanetter B; Yaffe S

CONTRACT NUMBER: R07638

SOURCE: Pflugers Archiv : European journal of physiology, (1983 May) Vol. 397, No. 3, pp. 214-9.
Journal code: 0154720. ISSN: 0031-6768.

PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 198309

ENTRY DATE: Entered STN: 19 Mar 1990
Last Updated on STN: 19 Mar 1990
Entered Medline: 23 Sep 1983

ABSTRACT:
The quantitative effects of norepinephrine (NE) on the active form of the cardiac **pyruvate** dehydrogenase complex (PDCa) and the rate of oxidative decarboxylation of **pyruvate** (MVPyr) were compared with those of **pyruvate** (Pyr). Isolated working guinea pig hearts metabolized **pyruvate** alone or in combination with alternative energy-providing substrates (ketone bodies, octanoate, glucose). NE produced proportional increases in PDCa and myocardial oxygen uptake (MVO2). Total PDC activity (PDC1) remained constant. The PDCa/PDC1 ratios in NE depleted hearts (reserpine pretreatment) compared well with those in hearts containing endogenous NE, provided myocardial substrate supply and MVO2 were also comparable. No evidence was obtained indicating that NE or perfusate Ca2+ can dissociate PDCa or MVPyr from MVO2, even in presence of the alternative cosubstrates. In contrast, 0.2-10 mM Pyr produced stepwise but only submaximum increases in PDCa and MVPyr, with MVO2 remaining constant. Thus, at all Pyr concentrations tested, NE stimulations of myocaridal energy utilization and MVO2 were followed by further increases in PDCa and MVPyr. Evidently, ***pyruvate*** , and particularly cellular respiration are important determinants in the regulation of cardiac PDC, also during adrenergic

stimulation of the heart.
CONTROLLED TERM: Check Tags: Male
Animals
Calcium: PD, pharmacology
*Energy Metabolism: DE, drug effects
Guinea Pigs
*Heart: DE, drug effects
In Vitro
Myocardium: EN, enzymology
*Myocardium: ME, metabolism
*Norepinephrine: PD, pharmacology
Oxidation-Reduction
Oxygen Consumption
***Pyruvate Dehydrogenase Complex: ME, metabolism**
***Pyruvates: ME, metabolism**
Research Support, U.S. Gov't, P.H.S.
CAS REGISTRY NO.: 51-41-2 (Norepinephrine); **7440-70-2 (Calcium)**
CHEMICAL NAME: 0 (**Pyruvate** Dehydrogenase Complex); 0 (**Pyruvates**)

L101 ANSWER 15 OF 34 MEDLINE on STN
ACCESSION NUMBER: 2004017836 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14551043
TITLE: The intermediary metabolite **pyruvate** attenuates stunning and reduces infarct size in in vivo porcine myocardium.
AUTHOR: Kristo Gentian; Yoshimura Yukihiro; Niu Jianli; Keith Byron J; Mentzer Robert M Jr; **Bunger Rolf**; Lasley Robert D
CORPORATE SOURCE: Department of Surgery, University of Kentucky College of Medicine, Lexington 40536-0298, USA.
CONTRACT NUMBER: R01-HL-34759 (NHLBI)
SOURCE: American journal of physiology. Heart and circulatory physiology, (2004 Feb) Vol. 286, No. 2, pp. H517-24. Electronic Publication: 2003-10-09. Journal code: 100901228. ISSN: 0363-6135.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200403
ENTRY DATE: Entered STN: 13 Jan 2004
Last Updated on STN: 10 Mar 2004
Entered Medline: 9 Mar 2004

ABSTRACT:
The intermediary metabolite **pyruvate** has been shown to exert significant beneficial effects in in vitro models of myocardial oxidative stress and ischemia-reperfusion injury. However, there have been few reports of the ability of **pyruvate** to attenuate myocardial stunning or reduce infarct size in vivo. This study tested whether supraphysiological levels of ***pyruvate*** protect against reversible and irreversible in vivo myocardial ischemia-reperfusion injury. Anesthetized, open-chest pigs (n = 7/group) underwent 15 min of left anterior descending coronary artery (LAD) occlusion and 3 h of reperfusion to induce stunning. Load-insensitive contractility measurements of regional preload recruitable stroke work (PRSW) and PRSW area (PRSWA) were generated. Vehicle or **pyruvate** (100 mg/kg i.v. bolus + 10 mg x kg(-1) x min(-1) intra-atrial infusion) was administered during ischemia and for the first hour of reperfusion. In infarct studies, pigs (n = 6/group) underwent 1 h of LAD ischemia and 3 h of reperfusion. Group I pigs received vehicle or **pyruvate** for 30 min before and throughout

ischemia. In group II, the infusion was extended through 1 h of reperfusion. In the stunning protocol, **pyruvate** significantly improved the recovery of PRSWA at 1 h (50 +/- 4% vs. 23 +/- 3% in controls) and 3 h (69 +/- 5% vs. 39 +/- 3% in controls) reperfusion. Control pigs exhibited infarct sizes of 66 +/- 1% of the area at risk. The **pyruvate** I protocol was associated with an infarct size of 49 +/- 3% (P < 0.05), whereas the ***pyruvate*** II protocol was associated with an infarct size of 30 +/- 2% (P < 0.05 vs. control and **pyruvate** I). These findings suggest that ***pyruvate*** attenuates stunning and decreases myocardial infarction in vivo in part by reduction of reperfusion injury. Metabolic interventions such as **pyruvate** should be considered when designing the optimal therapeutic strategies for limiting myocardial ischemia-reperfusion injury.

CONTROLLED TERM:
Animals
Bicarbonates: BL, blood
Carbon Dioxide: BL, blood
*Coronary Circulation: DE, drug effects
Disease Models, Animal
In Vitro
*Myocardial Infarction: PC, prevention & control
Myocardial Ischemia: ME, metabolism
Myocardial Ischemia: PP, physiopathology
Myocardial Ischemia: PC, prevention & control
*Myocardial Stunning: PC, prevention & control
Partial Pressure
***Pyruvates: PD, pharmacology**
Research Support, U.S. Gov't, P.H.S.
Sodium: BL, blood
Swine

CAS REGISTRY NO.: 124-38-9 (Carbon Dioxide); **7440-23-5 (Sodium)**
CHEMICAL NAME: 0 (Bicarbonates); 0 (**Pyruvates**)

L101 ANSWER 16 OF 34 MEDLINE on STN
ACCESSION NUMBER: 2000071633 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10603966
TITLE: Metabolic inotropy and **calcium** transients in isolated rat cardiomyocytes.
AUTHOR: Lasley R D; Martin B J; Valdivia H H; Mentzer R M Jr; **Bunger R**
CORPORATE SOURCE: Department of Surgery, University of Wisconsin, Madison, USA.. rlasley@pop.uky.edu
SOURCE: Annals of the New York Academy of Sciences, (1998 Sep 16) Vol. 853, pp. 308-10.
Journal code: 7506858. ISSN: 0077-8923.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 24 Jan 2000
Last Updated on STN: 24 Jan 2000
Entered Medline: 7 Jan 2000
CONTROLLED TERM: Check Tags: Male
Acetates: PD, pharmacology
Animals
***Calcium: ME, metabolism**
Coumaric Acids: PD, pharmacology
In Vitro
Isoproterenol: PD, pharmacology
Lactates: PD, pharmacology
Myocardial Contraction: DE, drug effects

*Myocardial Contraction: PH, physiology
Myocardium: CY, cytology
*Myocardium: ME, metabolism
Pyruvates: PD, pharmacology
Rats
Rats, Wistar

CAS REGISTRY NO.: 28166-41-8 (alpha-cyano-4-hydroxycinnamate); **7440-70-2 (Calcium)**; 7683-59-2 (Isoproterenol)

CHEMICAL NAME: 0 (Acetates); 0 (Coumaric Acids); 0 (Lactates); 0 (**Pyruvates**)

L101 ANSWER 17 OF 34 MEDLINE on STN

ACCESSION NUMBER: 84254134 MEDLINE

DOCUMENT NUMBER: PubMed ID: 6331186

TITLE: Parallel stimulation by Ca2+ of inotropism and **pyruvate** dehydrogenase in perfused heart.

AUTHOR: **Bunger R**; Permanetter B

CONTRACT NUMBER: HL-29-0 60-01 A1 (NHLBI)

SOURCE: The American journal of physiology, (1984 Jul) Vol. 247, No. 1 Pt 1, pp. C45-52.
Journal code: 0370511. ISSN: 0002-9513.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 198408

ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 20 Aug 1984

ABSTRACT:
The effects of extracellular Ca2+ (0.375-3.75 mM) on **pyruvate** oxidation and active form of the **pyruvate** dehydrogenase complex (PDCa) were quantitated in perfused guinea pig hearts in relation to inotropism, hydraulic work performance, and myocardial oxygen uptake (MVO2). The effects of afterload and norepinephrine (NE), alone or combined with the Ca2+ channel blocker D 600, were also examined. Hearts utilized 1-5 mM ***pyruvate*** in presence of 5 mM DL-3-hydroxybutyrate as substrates. ***Pyruvate*** oxidation and MVO2 increased essentially in parallel regardless of whether inotropism and energy metabolism were stimulated by increasing the Ca2+ concentration [(Ca2+]), the NE concentration [(NE]), or the afterload. PDCa activity was also directly related to [Ca2+], [NE], and afterload, respectively. Elevated [Ca2+] failed, however, to stimulate ***pyruvate*** oxidation and PDCa activity when MVO2 was held constant by an appropriate decrease in afterload at constant preload. Compound D 600, theophylline, and dibutyryl adenosine 3',5'-cyclic monophosphate also produced parallel alterations in cardiac mechanics, **pyruvate** oxidation, and MVO2. The striking proportionality between PDCa parameters, MVO2, and cardiac mechanics during the various alterations in cellular Ca2+ metabolism seemed to suggest that the observed Ca2+ stimulation of the PDC might be mainly secondary to increased myocardial energy utilization and myocyte respiration. Evidence for an additional direct effect of Ca2+ on the intact PDC system was not obtained.

CONTROLLED TERM: Check Tags: Male
Animals
Bucladesine: PD, pharmacology
***Calcium: PD, pharmacology**
Carbon Radioisotopes: DU, diagnostic use
Energy Metabolism
Gallopamil: PD, pharmacology
Guinea Pigs

Mitochondria, Heart: EN, enzymology
*Myocardial Contraction: DE, drug effects
*Myocardium: EN, enzymology
Norepinephrine: PD, pharmacology
Oxygen Consumption
Perfusion
***Pyruvate Dehydrogenase Complex: ME, metabolism**
Pyruvates: ME, metabolism
Pyruvic Acid
Research Support, U.S. Gov't, Non-P.H.S.
Research Support, U.S. Gov't, P.H.S.
Stimulation, Chemical
Theophylline: PD, pharmacology

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid); 16662-47-8 (Gallopamil); 362-74-3 (Bucladesine); 51-41-2 (Norepinephrine); 58-55-9 (Theophylline); **7440-70-2 (Calcium)**

CHEMICAL NAME: 0 (Carbon Radioisotopes); 0 (**Pyruvate** Dehydrogenase Complex); 0 (**Pyruvates**)

L101 ANSWER 18 OF 34 MEDLINE on STN
ACCESSION NUMBER: 82132877 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7058910
TITLE: Adaptive changes of **pyruvate** oxidation in perfused heart during adrenergic stimulation.
AUTHOR: **Bunger R**; Permanetter B; Sommer O; Yaffe S
SOURCE: The American journal of physiology, (1982 Jan) Vol. 242, No. 1, pp. H30-6.
Journal code: 0370511. ISSN: 0002-9513.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198204
ENTRY DATE: Entered STN: 17 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 20 Apr 1982

ABSTRACT:
Pyruvate oxidation was studied in isolated guinea pig hearts perfused under various conditions of work and stimulated by norepinephrine. Hearts metabolized **pyruvate** alone or in combination with 3-hydroxybutyrate or acetate as substrate. [1-14C]-**pyruvate**-dependent 14CO2 release into the venous effluent (MVpyr) was, like myocardial oxygen consumption (MVO2), directly related to aortic pressure or filling pressure. At high aortic pressures, ventricular pressure development and not work performance was the major determinant of MVO2 and thus MVpyr. With 1 mM **pyruvate** as sole substrate, 0.08 microM norepinephrine produced parallel changes in hemodynamic performance, MVO2. MVpyr, and **pyruvate** dehydrogenase complex (PDC) activity (active form). Similar and dose-dependent effects of norepinephrine were observed during infusion of 5 mM DL-3-hydroxybutyrate as cosubstrate. When 1 mM acetate was applied, MVpyr was also dependent on work performance and norepinephrine stimulation. However, in perfusions with 25 mM ***potassium*** chloride, norepinephrine did not enhance hemodynamic function or MVO2 and hence PDC activity and MVpyr. Thus regulation of the PDC in catecholamine-stimulated heart appears to be linked predominantly to myocardial energy demand even when alternative energy-providing substrates are utilized.

CONTROLLED TERM: Check Tags: Male
Animals
Blood Pressure: DE, drug effects
Energy Metabolism
Guinea Pigs

*Heart: PH, physiology
*Myocardium: ME, metabolism
*Norepinephrine: PD, pharmacology
Oxygen Consumption: DE, drug effects
Pyruvate Dehydrogenase Complex: ME, metabolism
***Pyruvates: ME, metabolism**
Pyruvic Acid
Research Support, U.S. Gov't, Non-P.H.S.

CAS REGISTRY NO.: 127-17-3 (Pyruvic Acid); 51-41-2 (Norepinephrine)
CHEMICAL NAME: 0 (**Pyruvate** Dehydrogenase Complex); 0 (**Pyruvates**)

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ACCESSION NUMBER: 2001290809 EMBASE
TITLE: **Pyruvate** improves cerebral metabolism during hemorrhagic shock.
AUTHOR: Mongan P.D.; Capacchione J.; Fontana J.L.; West S.; **Bunger R.**
CORPORATE SOURCE: P.D. Mongan, Dept. of Anesthesia, Uniformed Serv. Univ. of Hlth. Sci., 4301 Jones Bridge Rd., Bethesda, MD 20814, United States. pmongan@usuhs.mil
SOURCE: American Journal of Physiology - Heart and Circulatory Physiology, (2001) Vol. 281, No. 2 50-2, pp. H854-H864. .
Refs: 45
ISSN: 0363-6135 CODEN: AJPPDI
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 30 Aug 2001
Last Updated on STN: 30 Aug 2001

ABSTRACT: **Pyruvate** (PYR) improves cellular and organ function hypoxia and ischemia by stabilizing the reduced nicotinamide adenine dinucleotide redox state and cytosolic ATP phosphorylation potential. In this in vivo study, we evaluated the effects of intravenous **pyruvate** on neocortical function, indexes of the cytosolic redox state, cellular energy state, and ischemia during a prolonged (4 h) controlled arterial hemorrhage (40 mmHg) in swine. Thirty minutes after the onset of hemorrhagic shock, ***sodium*** PYR (n = 8) was infused (0.5 g.ovrhdot.kg(-1).ovrhdot.h(-1)) to attain arterial levels of 5 mM. The volume and osmotic effects were matched with 10% NaCl [hypertonic saline (HTS)] (n = 8) or 0.9% NaCl [normal saline (NS)] (n = 8). During the hemorrhage protocol, the time to peak hemorrhage volume was significantly delayed in the PYR group compared with the HTS and NS groups (94 ± 5 vs. 73 ± 6 and 72 ± 4 min, P < 0.05). In addition to the early onset of the decompensatory phase of hemorrhagic shock, the complete return of the hemorrhage volume during decompensatory shock resulted in the death of five and four animals, respectively, in the HTS and NS groups. In contrast, in the PYR group, reinfusion of the hemorrhage volume was slower and all animals survived the 4-h hemorrhage protocol. During hemorrhage, the PYR group also exhibited improved cerebral cortical metabolic and function status. PYR slowed and reduced the rise in neocortical microdialysis levels of adenosine, inosine, and hypoxanthine and delayed the loss of cerebral cortical biopsy ATP and phosphocreatine content. This improvement in energetic status was evident in the improved preservation of the electrocorticogram in the PYR group. PYR also prevented the eightfold increase in the excitotoxic amino acid glutamate observed in the HTS group. The findings show that PYR administered after the onset of hemorrhagic shock markedly improves cerebral metabolic and

functional status for at least 4 h.

CONTROLLED TERM: Medical Descriptors:
*hemorrhagic shock
*brain
swine
brain metabolism
oxidation reduction state
microdialysis
high performance liquid chromatography
nonhuman
animal model
animal tissue
article
priority journal
Drug Descriptors:
*pyruvic acid
adenosine triphosphate: EC, endogenous compound
nicotinamide adenine dinucleotide: EC, endogenous compound
sodium chloride
creatine phosphate: EC, endogenous compound
glutamic acid: EC, endogenous compound
CAS REGISTRY NO.: (pyruvic acid) 127-17-3, 19071-34-2, 57-60-3; (adenosine triphosphate) 15237-44-2, 56-65-5, 987-65-5; (nicotinamide adenine dinucleotide) 53-84-9; (**sodium** chloride) 7647-14-5; (creatine phosphate) 67-07-2; (glutamic acid) 11070-68-1, 138-15-8, 56-86-0, 6899-05-4

L101 ANSWER 20 OF 34 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2000033226 EMBASE
TITLE: Intravenous **pyruvate** prolongs survival during hemorrhagic shock in swine.
AUTHOR: Mongan P.D.; Fontana J.L.; Chen R.; **Bunger R.**
CORPORATE SOURCE: P.D. Mongan, Dept. of Anesthesia, Uniformed Svcs. Univ. of Hlth. Sci., 4301 Jones Bridge Road, Bethesda, MD 20814, United States. pmongan@usuhs.mil
SOURCE: American Journal of Physiology - Heart and Circulatory Physiology, (1999) Vol. 277, No. 6 46-6, pp. H2253-H2263.
Refs: 36
ISSN: 0363-6135 CODEN: AJPPDI
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 3 Feb 2000
Last Updated on STN: 3 Feb 2000
ABSTRACT: **Pyruvate** improves cellular and organ function during hypoxia and ischemia and stabilizes the NADH redox state and cytosolic ATP phosphorylation potential. In this in vivo study, we evaluated the effects of intravenous **pyruvate** on cardiovascular and neocortical function, indexes of the cytosolic redox state (lactate/**pyruvate** ratio, L/P) and cellular energy state (adenosine and degradative products hypoxanthine and inosine, ADO + HX + Ino) during controlled arterial hemorrhage (40 mmHg) in sedated swine (45 kg). Na+ **pyruvate** was infused 1 h before (1 g·kg-1·h-1) and 2 h during (0.5 g·kg-1·h-1) hemorrhage to attain arterial **pyruvate** levels of 6 mM. Volume (0.9% NaCl) and osmotic (10% NaCl) effects were matched in controls. Time to peak hemorrhage (57 min) and peak hemorrhage volume (43 ml/kg) were similar in all

groups. The volume and osmotic groups experienced spontaneous cardiovascular decompensation between 60 and 90 min, with an average time until death of 82.7 ± 5.5 and 74.8 ± 8.2 min. In contrast, survival in the **pyruvate** group was 151.2 ± 10.0 min (P < 0.001). During hemorrhage, the ***pyruvate*** group had better cardiovascular and cerebrovascular function with significantly higher systemic and cerebral oxygen consumption and less attenuation of the amplitude and frequency of the electrocorticogram. In addition, **pyruvate** prevented metabolic acidosis and stabilized the L/P. **Pyruvate** slowed the rise in neocortical microdialysis levels of ADO + HX + Ino, and prevented the net efflux of ADO + HX + Ino into the sagittal sinus. The findings reveal considerable metabolic and functional enhancement by **pyruvate** during severe hemorrhagic shock with a 75-min delay in spontaneous cardiovascular decompensation and death.

CONTROLLED TERM: Medical Descriptors:
*hemorrhagic shock
*survival
swine
cell function
hypoxia
ischemia
phosphorylation
oxidation reduction state
cell energy
cardiovascular function
oxygen consumption
metabolic acidosis
brain blood flow
nonhuman
animal experiment
animal model
controlled study
adolescent
article
priority journal
Drug Descriptors:
***pyruvate sodium**
*reduced nicotinamide adenine dinucleotide
*adenosine triphosphate
*pyruvic acid
*lactic acid
*hypoxanthine
sodium chloride
inosine

CAS REGISTRY NO.: (**pyruvate sodium**) 113-24-6; (reduced nicotinamide adenine dinucleotide) 58-68-4; (adenosine triphosphate) 15237-44-2, 56-65-5, 987-65-5; (pyruvic acid) 127-17-3, 19071-34-2, 57-60-3; (lactic acid) 113-21-3, 50-21-5; (hypoxanthine) 68-94-0; (**sodium** chloride) 7647-14-5; (inosine) 58-63-9

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ACCESSION NUMBER: 1998065219 EMBASE

TITLE: **Pyruvate** augments **calcium** transients and cell shortening in rat ventricular myocytes.

AUTHOR: Martin B.J.; Valdivia H.H.; **Bunger R.**; Lasley R.D.; Mentzer R.M. Jr.

CORPORATE SOURCE: B.J. Martin, Div. of Cardiothoracic Surgery, Univ. of Wisconsin Sch. of Medicine, H4/383 Clinical Science Center,

600 Highland Ave., Madison, WI 53792-0001, United States
SOURCE: American Journal of Physiology - Heart and Circulatory Physiology, (1998) Vol. 274, No. 1 43-1, pp. H8-H17. .
Refs: 38
ISSN: 0363-6135 CODEN: AJPPDI
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology.
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 9 Apr 1998
Last Updated on STN: 9 Apr 1998

ABSTRACT: **Pyruvate** has been shown to be a metabolic inotrope in the myocardium. In millimolar concentrations, it has been shown to increase both myocardial phosphorylation potential and the cytosolic [NAD+]-to-[NADH] ratio. To determine if changes in these parameters can alter intracellular Ca2+ concentration ([Ca2+](i)) and hence contractile function, Ca2+ transients and cell shortening (CS) were measured in isolated rat ventricular myocytes superfused with a physiological N-2-hydroxyethylpiperazine-N'-2- ethanesulfonic acid buffer (11 mmol/l glucose) with and without additional **pyruvate**, L-lactate, acetate, or isoproterenol. The addition of 5 mmol/l ***pyruvate*** resulted in a 33% increase in CS and a 39% increase in systolic [Ca2+](i). These **pyruvate** effects were 70% of those observed with 100 nmol/l isoproterenol. The mitochondrial monocarboxylate transport inhibitor α-cyano-4-hydroxycinnamate (250 μmol/l) strongly inhibited **pyruvate** inotropy, suggesting a substantial obligatory coupling between **pyruvate** inotropism and its oxidation by the mitochondria. A possible role of the cytosolic [NAD+]-to-[NADH] ratio was assessed by comparing the effects of 20 mmol/l L-lactate to those of equimolar ***pyruvate.*** In contrast to 20 mmol/l **pyruvate**, excess L-lactate failed to appreciably increase CS or systolic [Ca2+](i). The findings imply that, at levels substantially above 5 mmol/l, a portion of ***pyruvate*** inotropism might be due to extreme cytosolic [NAD+]- to-[NADH] ratios. This study is the first evidence that augmented [Ca2+](i) transients are most likely the mechanism of cardiac **pyruvate** inotropism.

CONTROLLED TERM: Medical Descriptors:
*heart muscle contractility
***calcium current**
sarcoplasmic reticulum
heart muscle cell
calcium cell level
mitochondrial respiration
glycolysis
nonhuman
male
rat
controlled study
animal cell
article
priority journal
Drug Descriptors:
*pyruvic acid
***calcium ion**
nicotinamide adenine dinucleotide
reduced nicotinamide adenine dinucleotide
isoprenaline
CAS REGISTRY NO.: (pyruvic acid) 127-17-3, 19071-34-2, 57-60-3; (**calcium** ion) 14127-61-8; (nicotinamide adenine dinucleotide) 53-84-9; (reduced nicotinamide adenine

dinucleotide) 58-68-4; (isoprenaline) 299-95-6, 51-30-9, 6700-39-6, 7683-59-2

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ACCESSION NUMBER: 95240636 EMBASE
DOCUMENT NUMBER: 1995240636
TITLE: Protection by **pyruvate** against inhibition of Na+,K+-ATase by a free radical generating system: Containing t-butylhydroperoxide.
AUTHOR: Clough D.; **Bunger R.**
CORPORATE SOURCE: Physiology, Uniformed Serv.Univ.of the Hlth Scis, 4301 Jones Bridge Road,Bethesda, MD 20814-4779, United States
SOURCE: Life Sciences, (1995) Vol. 57, No. 10, pp. 931-943. .
ISSN: 0024-3205 CODEN: LIFSAK
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 12 Sep 1995
Last Updated on STN: 12 Sep 1995

ABSTRACT: Global tissue damage due to oxygen-derived free radicals has been implicated in several pathological processes including exposure to ionizing radiation, and postischemic reperfusion of the heart or kidney. Recently ***pyruvate*** , a hydroperoxide scavenger, has been shown to protect against functional damage during postischemic reperfusion of the heart and in acute renal failure. In the present study, **pyruvate** was found to protect against inactivation of partially purified guinea pig renal and rat cardiac Na+,K+-ATPase which occurred when microsomal membranes were assayed for 1 hr at 37°C (pH 7.5) in the presence of a free radical generating system (FRGS) containing 0.3 mM t-butylhydroperoxide and horseradish peroxidase. The presence of the FRG system inhibited the guinea pig renal Na+,K+-ATPase activity by 48.2 ± 4.8% (N = 10, P < .05) and the presence of 0.2 to 20 mM ***pyruvate*** partially protected the Na+,K+-ATPase. At 5 mM ***pyruvate*** Na+,K+-ATPase was inhibited by only 18.8 ± 2.5% (N = 10, P < .05) but increasing the **pyruvate** concentration gave no further protection. Equimolar concentrations of glucose, mannitol or lactate were without effect. The protection appeared to require an α-keto acid since α- but not β-ketoglutarate was also effective and the mechanism is most probably the scavenging of t-BHO2. The results of the present study therefore support the hypothesis that, if free radical damage to native Na+,K+-ATPase does contribute to global tissue injury in certain pathological processes, **pyruvate**, in addition to being a powerful metabolic effector of recovery, may also protect against oxidative damage.

CONTROLLED TERM: Medical Descriptors:
*reperfusion injury: PC, prevention
*tissue injury: PC, prevention
animal tissue
article
enzyme inactivation
guinea pig
heart
kidney
male
nonhuman
oxidative stress

Drug Descriptors:
***adenosine triphosphatase (potassium sodium): EC, endogenous compound**
*free radical: EC, endogenous compound
*horseradish peroxidase: PD, pharmacology
*pyruvic acid: PD, pharmacology
*pyruvic acid: DO, drug dose
*tert butyl hydroperoxide: PD, pharmacology
glucose
lactic acid
mannitol

CAS REGISTRY NO.: (pyruvic acid) 127-17-3, 19071-34-2, 57-60-3; (tert butyl hydroperoxide) 75-91-2; (glucose) 50-99-7, 84778-64-3; (lactic acid) 113-21-3, 50-21-5; (mannitol) 69-65-8, 87-78-5

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ACCESSION NUMBER: 84171056 EMBASE
DOCUMENT NUMBER: 1984171056
TITLE: Parallel stimulation by Ca2+ of inotropism and **pyruvate** dehydrogenase in perfused heart.
AUTHOR: **Bunger R.**; Permanetter B.
CORPORATE SOURCE: Department of Physiology, School of Medicine, Uniformed Services, University of the Health Sciences, Bethesda, MD 20814, United States
SOURCE: American Journal of Physiology - Cell Physiology, (1984) Vol. 16, No. 1, pp. C45-C52. .
CODEN: AJPCDD
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
002 Physiology
030 Pharmacology
029 Clinical Biochemistry
018 Cardiovascular Diseases and Cardiovascular Surgery
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Dec 1991
Last Updated on STN: 10 Dec 1991

ABSTRACT: The effects of extracellular Ca2+ (0.375-3.75 mM) on ***pyruvate*** oxidation and active form of the **pyruvate** dehydrogenase complex (PDC(a)) were quantitated in perfused guinea pig hearts in relation to inotropism, hydraulic work performance, and myocardial oxygen uptake (MV.ovrhdot.(O2)). The effects of afterload and norepinephrine (NE), alone or combined with the Ca2+ channel blocker D 600, were also examined. Hearts utilized 1-5 mM **pyruvate** in presence of 5 mM DL-3-hydroxybutyrate as substrates. **Pyruvate** oxidation and MV.ovrhdot.(O2) increased essentially in parallel regardless of whether inotropism and energy metabolism were stimulated by increasing the Ca2+ concentration ([Ca2+]), the NE concentrations ([NE]), or the afterload. PDC(a) activity was also directly related to [Ca2+], [NE], and afterload, respectively. Elevated [Ca2+] failed, however, to stimulate **pyruvate** oxidation and PDC(a) activity when MV.ovrhdot.(O2) was held constant by an appropriate decrease in afterload at constant preload. compound D 600, theophylline, and dibutyryl adenosine 3',5'-cyclic monophosphate also produced parallel alterations in cardiac mechanics, **pyruvate** oxidation, and MV.ovrhdot.(O2). The striking proportionality between PDC(a) parameters, MV.ovrhdot.(O2), and cardiac mechanics during the various alterations in cellular Ca2+ metabolism seemed to suggest that the observed Ca2+ stimulation of the PDC might be mainly secondary to increased myocardial energy utilization

and myocyte respiration. Evidence for an additional direct effect of Ca2+ on the intact PDC system was not obtained.

CONTROLLED TERM: Medical Descriptors:
*dose response
*drug antagonism
*drug comparison
*drug mechanism
*drug metabolism
*heart contraction
*heart perfusion
*inotropism
*isolated heart
*oxygen consumption
pyruvic acid c 14
drug response
regional perfusion
nonhuman
heart
guinea pig
animal cell
Drug Descriptors:
***calcium**
*bucladesine
*gallopamil
*noradrenalin
***pyruvate dehydrogenase**
*theophylline
radioisotope

CAS REGISTRY NO.: (**calcium**) 7440-70-2; (bucladesine) 16980-89-5, 362-74-3; (gallopamil) 16662-47-8; (noradrenalin) 1407-84-7, 51-41-2; (**pyruvate** dehydrogenase) 9014-20-4; (theophylline) 58-55-9, 5967-84-0, 8055-07-0, 8061-56-1, 99007-19-9

COMPANY NAME: Boehringer (Germany); Amersham (Germany); Sigma (United States); Knoll (Germany)

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ACCESSION NUMBER: 82183105 EMBASE
DOCUMENT NUMBER: 1982183105
TITLE: Adaptive changes of **pyruvate** oxidation in perfused heart during adrenergic stimulation.
AUTHOR: **Bunger R.**; Permanetter B.; Sommer O.; Yaffe S.
CORPORATE SOURCE: Dep. Physiol., Univ. Munich, D-8000 Munich, Germany
SOURCE: American Journal of Physiology - Heart and Circulatory Physiology, (1982) Vol. 11, No. 1, pp. H30-H36. .
CODEN: AJPPDI
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
002 Physiology
018 Cardiovascular Diseases and Cardiovascular Surgery
023 Nuclear Medicine
029 Clinical Biochemistry
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991

ABSTRACT: **Pyruvate** oxidation was studied in isolated guinea pig hearts perfused under various conditions of work and stimulated by

norepinephrine. Hearts metabolized **pyruvate** alone or in combination with 3-hydroxybutyrate or acetate as substrate. [1-14C]-**pyruvate** -dependent 14CO2 release into the venous effluent (MV.ovrhdot.pyr) was, like myocardial oxygen consumption (MV.ovrhdot.O2), directly related to aortic pressure or filling pressure. At high aortic pressures, ventricular pressure development and not work performance was the major determinant of MV.ovrhdot.O2 and thus MV.ovrhdot.pyr. With 1 nM **pyruvate** as sole substrate, 0.08 μM norepinephrine produced parallel changes in hemodynamic performance, MV.ovrhdot.O2, MV.ovrhdot.pyr, and **pyruvate** dehydrogenase complex (PDC) activity (active form). Similar and dose-dependent effects of norepinephrine were observed during infusion of 5 mM DL-3-hydroxybutyrate as cosubstrate. When 1 mM acetate was applied, MV.ovrhdot.pyr was also dependent on work performance and norepinephrine stimulation. However, in perfusions with 25 mM **potassium** chloride, norepinephrine did not enhance hemodynamic function or MV.ovrhdot.O2 and hence PDC activity and MV.ovrhdot.pyr. Thus regulation of the PDC in catecholamine-stimulated heart appears to be linked predominantly to myocardial energy demand even when alternative energy-providing substrates are utilized.

CONTROLLED TERM: Medical Descriptors:
*cell energy
*heart
*heart function
*oxygen consumption
*pyruvic acid c 14
isolated heart
animal experiment
guinea pig
regional perfusion
Drug Descriptors:
*3 hydroxybutyric acid
*acetic acid
*adrenergic receptor
*noradrenalin
***pyruvate dehydrogenase**
radioisotope

CAS REGISTRY NO.: (3 hydroxybutyric acid) 300-85-6; (acetic acid) 127-08-2, 127-09-3, 64-19-7, 71-50-1; (noradrenalin) 1407-84-7, 51-41-2; (**pyruvate** dehydrogenase) 9014-20-4

COMPANY NAME: Boehringer (Germany); Sigma (United States); Amersham

L101 ANSWER 25 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:202536 BIOSIS

DOCUMENT NUMBER: PREV200400203079

TITLE: Synergistic neuroprotection by nutriceuticals.

AUTHOR(S): McFate, T. [Reprint Author]; Favit, A. [Reprint Author]; Grimaldi, M. [Reprint Author]; **Verma, A.** [Reprint Author]

CORPORATE SOURCE: Neurol., Uniformed Services Univ. of the Hlth. Sci., Bethesda, MD, USA

SOURCE: Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 638.5. http://sfn.scholarone.com. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

ABSTRACT:Simple nutrients may be able to prevent neurotoxicity by correcting metabolic imbalances. We have performed in vitro experiments using cultured neuronal cells subjected to cell killing by oxidative stress, **calcium** overload, two of the most commonly sited pathologic events in neurotoxicity. We studied cytotoxicity in the rat hypothalamic neuronal cell line GT1-7 with hydrogen peroxide and thapsigargin as models of oxidative stress and ***calcium*** overload. All studies were performed in Locke's medium to avoid contribution from the vitamins and additives typically found in many commercial media. After determining the toxin treatment dose needed to produce complete toxicity, we then treated the cells dose-dependently with ***pyruvate*** , nicotinamide and creatine, either alone or in combination along with the LD95 dose of the toxins. We then analyzed the amount of cell death observed after 24h using a standard cytotoxicity (MTT dye reduction) assay. **Pyruvate**, nicotinamide and creatine were each capable of providing nearly complete dose dependent protection against 500 micromolar H2O2 (IC50 of 0.35, 0.38, and 0.49 mM respectively) or against 20 micromolar thapsigargin (IC50 of 0.58, 0.62, and 0.74 mM respectively).. When added together, however, these agents produced a more than additive effect with a 10-fold increase in potency. Thus an IC50 of 0.05 was seen for each agent when used in combination in both cytotoxicity paradigms. When we analyzed the the effect of these agents on GTI-7 ATP levels we saw no significant increase. However, analysis of phosphocreatine (PC) levels showed that 1mM doses of ***pyruvate*** , nicotinamide, and creatine stimulated GT1-7 PC levels by 500%, 30%, and 3000% respectively. When used in combination at 1mM each, these agents increased PC content by more that 5000%. These remarkable synergistic effects of nutriceutical may be translated into effective therapeutic strategies.

CONCEPT CODE:
General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Minerals 10069
Nervous system - Physiology and biochemistry 20504
Nervous system - Pathology 20506

INDEX TERMS: Major Concepts
Nervous System (Neural Coordination)

INDEX TERMS: Parts, Structures, & Systems of Organisms
neuronal cells: nervous system

INDEX TERMS: Diseases
neurotoxicity: nervous system disease

INDEX TERMS: Chemicals & Biochemicals
ATP; GTI; MTT; **calcium**; creatine; hydrogen peroxide; nicotinamide; phosphocreatine; **pyruvate**; thapsigargin; toxin

INDEX TERMS: Miscellaneous Descriptors
neuroprotection

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rat (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates,

Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 56-65-5Q (ATP)
42530-29-0Q (ATP)
94587-45-8Q (ATP)
111839-44-2Q (ATP)
298-93-1 (MTT)
7440-70-2 (**calcium**)
57-00-1 (creatine)
7722-84-1 (hydrogen peroxide)
98-92-0 (nicotinamide)
67-07-2 (phosphocreatine)
57-60-3 (**pyruvate**)
67526-95-8 (thapsigargin)

L101 ANSWER 26 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:415813 BIOSIS
DOCUMENT NUMBER: PREV200100415813
TITLE: Immunochemical detection of **pyruvate** dehydrogenase inactivation.
AUTHOR(S): **Verma, Ajay** [Reprint author]; Sharma, Pushpa [Reprint author]; Romanczyk, Tara [Reprint author]; Pandipati, Sruthi [Reprint author]; Beckwith, Susan [Reprint author]
CORPORATE SOURCE: Bethesda, MD, USA
SOURCE: Neurology, (April 24, 2001) Vol. 56, No. 8 Supplement 3, pp. A368. print.
Meeting Info.: 53rd Annual Meeting of the American Academy of Neurology. Philadelphia, PA, USA. May 05-11, 2001. American Academy of Neurology.
CODEN: NEURAI. ISSN: 0028-3878.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 29 Aug 2001
Last Updated on STN: 22 Feb 2002
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Minerals 10069
Enzymes - General and comparative studies: coenzymes 10802
Metabolism - Metabolic disorders 13020
Cardiovascular system - Physiology and biochemistry 14504
Nervous system - Physiology and biochemistry 20504
Nervous system - Pathology 20506
INDEX TERMS: Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Nervous System (Neural Coordination)
INDEX TERMS: Parts, Structures, & Systems of Organisms
astrocyte: nervous system; blood vessel: circulatory system; brain cortex: nervous system; brain mitochondria: nervous system; hippocampal neuron: nervous system
INDEX TERMS: Diseases
brain metabolic dysfunction: metabolic disease, nervous system disease
INDEX TERMS: Chemicals & Biochemicals

EGTA: **calcium** chelator; acetyl CoA: **pyruvate** dehydrogenase end product; **calcium**: enzyme inducer; dichloroacetate: enzyme inducer; **pyruvate** dehydrogenase: activation, localization, non-phosphorylated form, phosphorylated form, phosphorylation, regulation; **pyruvate** dehydrogenase E1-alpha subunit: phosphorylation

INDEX TERMS: Methods & Equipment
immunochemical detection: detection method

INDEX TERMS: Miscellaneous Descriptors
Meeting Poster; Meeting Abstract

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rat: animal model
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER: 67-42-5 (EGTA)
72-89-9 (acetyl CoA)
7440-70-2 (**calcium**)
13425-80-4 (dichloroacetate)
9014-20-4 (**pyruvate** dehydrogenase)

L101 ANSWER 27 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:150111 BIOSIS
DOCUMENT NUMBER: PREV200000150111
TITLE: **Pyruvate** protects neurons from H2O2, **calcium** and glutamate toxicity.
AUTHOR(S): Favit, A. [Reprint author]; **Verma, A.** [Reprint author]
CORPORATE SOURCE: Dept. of Neurology, Uniformed Services Univ. of the Health Sciences, Bethesda, MD, 20184, USA
SOURCE: Society for Neuroscience Abstracts, (1999) Vol. 25, No. 1-2, pp. 1296. print.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA. October 23-28, 1999. Society for Neuroscience.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Apr 2000
Last Updated on STN: 4 Jan 2002
CONCEPT CODE: Pharmacology - General 22002
Cytology - Animal 02506
Biochemistry studies - General 10060
Toxicology - General and methods 22501
Nervous system - General and methods 20501
General biology - Symposia, transactions and proceedings 00520
INDEX TERMS: Major Concepts
Nervous System (Neural Coordination); Pharmacology
INDEX TERMS: Parts, Structures, & Systems of Organisms
blood-brain barrier: circulatory system, nervous system; brain: nervous system; cerebrocortical neuronal cells: nervous system, cultured; neurons: nervous system

INDEX TERMS: Chemicals & Biochemicals
calcium; glutamate; hydrogen peroxide; **pyruvate**: neuroprotectant-drug; reactive oxygen species
INDEX TERMS: Methods & Equipment
MTT assay: analytical method
INDEX TERMS: Miscellaneous Descriptors
neurotoxicity; Meeting Abstract
ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
GT1-7 cell line: murine hypothalamic neuronal cells
rat
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 7440-70-2 (**calcium**)
11070-68-1 (glutamate)
7722-84-1 (hydrogen peroxide)
57-60-3 (**pyruvate**)

L101 ANSWER 28 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1999:283014 BIOSIS
DOCUMENT NUMBER: PREV199900283014
TITLE: i.v. **sodium pyruvate** protects against cerebral ischemia and prolongs survival during porcine hemorrhagic shock.
AUTHOR(S): Mongan, P. D. [Reprint author]; Fontana, J. L. [Reprint author]; Chen, R. [Reprint author]; **Bunger, R.** [Reprint author]
CORPORATE SOURCE: Depts. of Anesthesiology and Physiology, USUHS, Bethesda, MD, 20814, USA
SOURCE: FASEB Journal, (March 15, 1999) Vol. 13, No. 5 PART 2, pp. A755. print.
Meeting Info.: Annual Meeting of the Professional Research Scientists on Experimental Biology 99. Washington, D.C., USA. April 17-21, 1999. Federation of American Societies for Experimental Biology.
CODEN: FAJOEC. ISSN: 0892-6638.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Jul 1999
Last Updated on STN: 28 Jul 1999
CONCEPT CODE: Pharmacology - General 22002
Pathology - Therapy 12512
Cardiovascular system - General and methods 14501
General biology - Symposia, transactions and proceedings 00520
Biochemistry studies - General 10060
INDEX TERMS: Major Concepts
Cardiovascular System (Transport and Circulation); Pharmacology
INDEX TERMS: Diseases
cerebral ischemia: nervous system disease, vascular disease
Brain Ischemia (MeSH)

INDEX TERMS: Diseases
hemorrhagic shock: vascular disease
Shock, Hemorrhagic (MeSH)
INDEX TERMS: Chemicals & Biochemicals
sodium pyruvate:
neuroprotectant-drug
INDEX TERMS: Miscellaneous Descriptors
Meeting Abstract
ORGANISM: Classifier
Suidae 85740
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
porcine
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
REGISTRY NUMBER: 113-24-6 (**sodium pyruvate**)

L101 ANSWER 29 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1999:87187 BIOSIS
DOCUMENT NUMBER: PREV199900087187
TITLE: Metabolic inotropy and **calcium** transients in isolated rat cardiomyocytes.
AUTHOR(S): Lasley, Robert D. [Reprint author]; Martin, Bradley J.; Valdivia, Hector H.; Mentzer, Robert M., Jr.; **Bunger, Rolf**
CORPORATE SOURCE: Dep. Surgery, Univ. Ky. Coll. Med., Room MN 273, Chandler Med. Cent., 800 Rose Street, Lexington, KY 40536-0084, USA
SOURCE: Johnson, R. G., Jr. [Editor]; Kranias, E. G. [Editor]. Ann. N. Y. Acad. Sci., (1998) pp. 308-310. Annals of the New York Academy of Sciences; Cardiac sarcoplasmic reticulum function and regulation of contractility. print.
Publisher: New York Academy of Sciences, 2 East 63rd Street, New York, New York 10021, USA. Series: Annals of the New York Academy of Sciences.
Meeting Info.: Conference. Washington, D.C., USA. September 27-30, 1997. New York Academy of Sciences.
CODEN: ANYAA9. ISSN: 0077-8923. ISBN: 1-57331-130-8 (paper), 1-57331-129-4 (cloth).
DOCUMENT TYPE: Book
Conference; (Meeting)
Book; (Book Chapter)
Conference; (Meeting Poster)
Conference; (Meeting Paper)
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Mar 1999
Last Updated on STN: 1 Mar 1999
CONCEPT CODE: Cardiovascular system - General and methods 14501
Cytology - Animal 02506
Biochemistry studies - General 10060
Biophysics - Bioenergetics: electron transport and oxidative phosphorylation 10510
Anatomy and Histology - Microscopic and ultramicroscopic anatomy 11108
Metabolism - Energy and respiratory metabolism 13003
General biology - Miscellaneous 00532
INDEX TERMS: Major Concepts
Bioenergetics (Biochemistry and Molecular Biophysics);

Cardiovascular System (Transport and Circulation); Cell Biology
INDEX TERMS: Parts, Structures, & Systems of Organisms
cardiomyocytes: circulatory system, muscular system; myocardium: circulatory system, muscular system
INDEX TERMS: Chemicals & Biochemicals
pyruvate; sarcoplasmic reticulum
calcium-ATPase
INDEX TERMS: Miscellaneous Descriptors
calcium transients; metabolic inotropy; Book Chapter; Meeting Paper; Meeting Poster
ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rat
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 57-60-3 (**pyruvate**)
7440-70-2 (**CALCIUM**)
9000-83-3 (ATPASE)

L101 ANSWER 30 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:291848 BIOSIS
DOCUMENT NUMBER: PREV199800291848
TITLE: Neocortical purine nucleoside accumulation during hemorrhagic shock is attenuated by **pyruvate** in swine.
AUTHOR(S): Mongan, P. D. [Reprint author]; Chen, R.; Fontana, J. L.; **Bunger, R.**
CORPORATE SOURCE: Dep. Anesthesiol., USUHS, Bethesda, MD, USA
SOURCE: Drug Development Research, (Jan., 1998) Vol. 43, No. 1, pp. 47. print.
Meeting Info.: 6th International Symposium on Adenosine and Adenine Nucleotides: New Frontiers in the 3rd Millennium. Ferrara, Italy. May 19-24, 1998.
CODEN: DDREDK. ISSN: 0272-4391.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Jul 1998
Last Updated on STN: 8 Jul 1998
CONCEPT CODE: Pharmacology - Neuropharmacology 22024
Metabolism - General metabolism and metabolic pathways 13002
Cardiovascular system - Blood vessel pathology 14508
Nervous system - Pathology 20506
Pharmacology - Drug metabolism and metabolic stimulators 22003
General biology - Symposia, transactions and proceedings 00520
INDEX TERMS: Major Concepts
Cardiovascular System (Transport and Circulation); Nervous System (Neural Coordination); Pharmacology
INDEX TERMS: Parts, Structures, & Systems of Organisms
frontal neocortex: nervous system
INDEX TERMS: Diseases

hemorrhagic shock
Shock, Hemorrhagic (MeSH)
INDEX TERMS: Chemicals & Biochemicals
sodium pyruvate
INDEX TERMS: Miscellaneous Descriptors
neocortical purine nucleoside accumulation; Meeting Abstract
ORGANISM: Classifier
Suidae 85740
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
swine
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
REGISTRY NUMBER: 113-24-6 (**sodium pyruvate**)
57-60-3 (**PYRUVATE**)

L101 ANSWER 31 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:19006 BIOSIS
DOCUMENT NUMBER: PREV199800019006
TITLE: **Pyruvate** inotropism is dependent upon its mitochondrial uptake.
AUTHOR(S): Martin, Bradley J. [Reprint author]; Lasley, Robert D.; Valdivia, Hector H. [Reprint author]; **Bunger, Rolf** ; Mentzer, Robert M., Jr.
CORPORATE SOURCE: Univ. Wisconsin, Madison, WI, USA
SOURCE: Circulation, (10/21/97) Vol. 96, No. 8 SUPPL., pp. I691. print.
Meeting Info.: 70th Scientific Sessions of the American Heart Association. Orlando, Florida, USA. November 9-12, 1997.
CODEN: CIRCAZ. ISSN: 0009-7322.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Jan 1998
Last Updated on STN: 24 Feb 1998
CONCEPT CODE: Cardiovascular system - General and methods 14501
Cytology - Animal 02506
Biochemistry studies - General 10060
Muscle - General and methods 17501
General biology - Symposia, transactions and proceedings 00520
INDEX TERMS: Major Concepts
Cardiovascular System (Transport and Circulation); Cell Biology
INDEX TERMS: Parts, Structures, & Systems of Organisms
ventricular myocytes: circulatory system, muscular system
INDEX TERMS: Chemicals & Biochemicals
intracellular **calcium** ion; **pyruvate** inotropism
INDEX TERMS: Miscellaneous Descriptors
cell shortening; contractility; energy-yielding substrate metabolism; glucose-dependent glycolysis; mitochondrial uptake; sarcoplasmic reticular **calcium** ion handling; Meeting Abstract

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rat
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 50-99-7 (GLUCOSE)
14127-61-8 (**CALCIUM** ION)

L101 ANSWER 32 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:5235 BIOSIS
DOCUMENT NUMBER: PREV199799304438
TITLE: **Pyruvate** augments **calcium** transients and contractility in rat ventricular myocytes.
AUTHOR(S): Martin, Bradley J. [Reprint author]; Lasley, Robert D.; Valdivia, Hector H.; **Bunger, Rolf**; Mentzer, Robert M., Jr.
CORPORATE SOURCE: Univ. Wisconsin, Madison, WI, USA
SOURCE: Circulation, (1996) Vol. 94, No. 8 SUPPL., pp. I545-I546. Meeting Info.: 69th Scientific Sessions of the American Heart Association. New Orleans, Louisiana, USA. November 10-13, 1996.
CODEN: CIRCAZ. ISSN: 0009-7322.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 7 Jan 1997
Last Updated on STN: 7 Jan 1997
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry methods - Carbohydrates 10058
Biochemistry methods - Minerals 10059
Biochemistry studies - Carbohydrates 10068
Biochemistry studies - Minerals 10069
Movement 12100
Metabolism - Carbohydrates 13004
Metabolism - Minerals 13010
Cardiovascular system - Anatomy 14502
Cardiovascular system - Physiology and biochemistry 14504
In vitro cellular and subcellular studies 32600
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Cardiovascular System (Transport and Circulation); Cell Biology; Metabolism
INDEX TERMS: Chemicals & Biochemicals
PYRUVATE; **CALCIUM**
INDEX TERMS: Miscellaneous Descriptors
CALCIUM TRANSIENTS; CARDIAC SYSTEM; CARDIOVASCULAR SYSTEM; CONTRACTILITY; **PYRUVATE** ; VENTRICULAR MYOCYTE
ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name

rat
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER: 57-60-3 (**PYRUVATE**)
7440-70-2 (**CALCIUM**)

L101 ANSWER 33 OF 34 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1992:249074 BIOSIS
DOCUMENT NUMBER: PREV199242119374; BR42:119374
TITLE: PROTECTION BY EXCESS **PYRUVATE** AGAINST IN-VITRO INACTIVATION OF RENAL **SODIUM POTASSIUM** ATPASE BY A FREE RADICAL GENERATING SYSTEM CONTAINING BUTYLHYDROPEROXIDE BOOH.
AUTHOR(S): CLOUGH D [Reprint author]; **BUNGER R**
CORPORATE SOURCE: DEP PHYSIOL, UNIORMED SERV UNIV HEALTH SCI, BETHESDA, MD 20814-4799, USA
SOURCE: FASEB Journal, (1992) Vol. 6, No. 4, pp. A1055.
Meeting Info.: 1992 MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (FASEB), PART I, ANAHEIM, CALIFORNIA, USA, APRIL 5-9, 1992. FASEB (FED AM SOC EXP BIOL) J.
CODEN: FAJOEC. ISSN: 0892-6638.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 14 May 1992
Last Updated on STN: 15 May 1992
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry - Gases 10012
Biophysics - Molecular properties and macromolecules 10506
Biophysics - Membrane phenomena 10508
Biophysics - Bioenergetics: electron transport and oxidative phosphorylation 10510
Enzymes - Physiological studies 10808
Metabolism - Energy and respiratory metabolism 13003
Cardiovascular system - Heart pathology 14506
Cardiovascular system - Blood vessel pathology 14508
Urinary system - General and methods 15501
Urinary system - Physiology and biochemistry 15504
Urinary system - Pathology 15506
Toxicology - General and methods 22501
In vitro cellular and subcellular studies 32600
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Bioenergetics (Biochemistry and Molecular Biophysics); Cardiovascular System (Transport and Circulation); Cell Biology; Enzymology (Biochemistry and Molecular Biophysics); Membranes (Cell Biology); Metabolism; Toxicology; Urinary System (Chemical Coordination and Homeostasis)
INDEX TERMS: Miscellaneous Descriptors
ABSTRACT GUINEA-PIG KIDNEY HEART MEMBRANE PUMP ISCHEMIA REPERFUSION INJURY
ORGANISM: Classifier
Caviidae 86300
Super Taxa

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CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 30 August 2006 (20060830/ED)

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FILE LAST UPDATED: 25 AUG 2006 <20060825/UP>
MOST RECENT DERWENT UPDATE: 200655 <200655/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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PLEASE VISIT:
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>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

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FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Aug 25, 2006 (20060825/UP).

FILE HCAPLUS

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FILE COVERS 1907 - 1 Sep 2006 VOL 145 ISS 11
FILE LAST UPDATED: 31 Aug 2006 (20060831/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE MEDLINE
FILE LAST UPDATED: 31 Aug 2006 (20060831/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE
FILE COVERS 1974 TO 1 Sep 2006 (20060901/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.

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     FILE 'WPIX' ENTERED AT 13:19:46 ON 01 SEP 2006
                D STAT QUE L99

     FILE 'STNGUIDE' ENTERED AT 13:20:04 ON 01 SEP 2006

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 13:20:18 ON 01
     SEP 2006
L101          34 DUP REM L100 L98 L99 (16 DUPLICATES REMOVED)
                     ANSWERS '1-5' FROM FILE HCAPLUS
                     ANSWERS '6-18' FROM FILE MEDLINE
                     ANSWERS '19-24' FROM FILE EMBASE
                     ANSWERS '25-34' FROM FILE BIOSIS
                D IBIB ABS HITIND HITSTR L101 1-5
                D IALL L101  6-34

     FILE 'STNGUIDE' ENTERED AT 13:22:10 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 13:22:19 ON 01 SEP 2006

     FILE 'HCAPLUS' ENTERED AT 13:22:25 ON 01 SEP 2006
                D STAT QUE L43
                D STAT QUE L55
                D STAT QUE L57
                D STAT QUE L60
                D STAT QUE L64
                D STAT QUE L66
                D STAT QUE L68
                D STAT QUE L72
                D STAT QUE L79
                D STAT QUE L84
L102         100 SEA ABB=ON  PLU=ON  (L43 OR L55 OR L57 OR L60 OR L64 OR L66 OR
                L68 OR L72 OR L79 OR L84 ) NOT L100
                D IBIB ABS HITIND HITSTR L102 1-100

     FILE 'STNGUIDE' ENTERED AT 13:26:19 ON 01 SEP 2006


     FILE HOME

     FILE REGISTRY
     Property values tagged with IC are from the ZIC/VINITI data file
     provided by InfoChem.

     STRUCTURE FILE UPDATES:   30 AUG 2006  HIGHEST RN 905475-39-0
     DICTIONARY FILE UPDATES:  30 AUG 2006  HIGHEST RN 905475-39-0

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

     TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

       Please note that search-term pricing does apply when
       conducting SmartSELECT searches.

     REGISTRY includes numerically searchable data for experimental and
     predicted properties as well as tags indicating availability of
     experimental property data in the original document.  For information
     on property searching in REGISTRY, refer to:

     http://www.cas.org/ONLINE/UG/regprops.html
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```
L69          78 SEA ABB=ON  PLU=ON  L64 OR L66 OR L68
L70           9 SEA ABB=ON  PLU=ON  L69 AND PY<1996
                D QUE L67
L71             QUE ABB=ON  PLU=ON  VISCER? LEISHMAN?/OBI OR MALARIA/OBI OR
                PERIODONTAL DISEAS?/OBI OR GUM DISEAS?/OBI OR CNS DISORD?/OBI
                OR CERVICAL DYSTOM?/OBI OR SPASM? TORTICOL?/OBI OR CHORID?
                NEOVASCULAR/OBI OR HEPATITIS/OBI OR COLITIS/OBI OR CYSTIC
                FIBROSIS/OBI
L72           4 SEA ABB=ON  PLU=ON  L71 AND L31
L73          79 SEA ABB=ON  PLU=ON  L69 OR L72
L74          46 SEA ABB=ON  PLU=ON  BUNGER R?/AU
L75        1172 SEA ABB=ON  PLU=ON  VERMA A?/AU
L76           2 SEA ABB=ON  PLU=ON  L74 AND L75
L77           2 SEA ABB=ON  PLU=ON  (L74 OR L75) AND L73
L78          34 SEA ABB=ON  PLU=ON  L30 (L) FFD/RL
L79          18 SEA ABB=ON  PLU=ON  L78 AND L31
L80           7 SEA ABB=ON  PLU=ON  L79 AND L73
                D SCA
L81         104 SEA ABB=ON  PLU=ON  L43 OR L55 OR L57 OR L60 OR L64 OR L66 OR
                L68 OR L72 OR L79
L82          13 SEA ABB=ON  PLU=ON  L81 AND PY<1996
L83           4 SEA ABB=ON  PLU=ON  L81 AND (L74 OR L75)
L84          12 SEA ABB=ON  PLU=ON  L81 AND (L52 OR L53 OR L54)

     FILE 'STNGUIDE' ENTERED AT 13:13:09 ON 01 SEP 2006
                D COST

     FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 13:13:55 ON 01 SEP 2006
L85           0 SEA ABB=ON  PLU=ON  BUNGER R?/AU AND VERMA A?/AU
L86         229 SEA ABB=ON  PLU=ON  BUNGER R?/AU
L87        2397 SEA ABB=ON  PLU=ON  VERMA A?/AU
L88           0 SEA ABB=ON  PLU=ON  L86 AND L87
L89      116518 SEA ABB=ON  PLU=ON  ?PYRUVAT?
L90         130 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89
L91           0 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89 AND SALT
L92          11 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89 AND SODIUM
L93           4 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89 AND POTASSIUM
L94           3 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89 AND MAGNESIUM
L95          25 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89 AND CALCIUM
L96           0 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89 AND LITHIUM
L97           0 SEA ABB=ON  PLU=ON  (L86 OR L87) AND L89 AND BARIUM
L98          41 SEA ABB=ON  PLU=ON  (L92 OR L93 OR L94 OR L95)

     FILE 'STNGUIDE' ENTERED AT 13:17:02 ON 01 SEP 2006

     FILE 'WPIX' ENTERED AT 13:17:43 ON 01 SEP 2006
L99           4 SEA ABB=ON  PLU=ON  (L91 OR L92 OR L93 OR L94 OR L95 OR L96 OR
                L97)

     FILE 'STNGUIDE' ENTERED AT 13:18:08 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 13:18:31 ON 01 SEP 2006

     FILE 'HCAPLUS' ENTERED AT 13:18:39 ON 01 SEP 2006
                D STAT QUE L76
                D STAT QUE L83
L100          5 SEA ABB=ON  PLU=ON  L76 OR L83

     FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 13:19:26 ON 01 SEP 2006
                D STAT QUE L98
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                E CREATINE/CN
L44          603 SEA ABB=ON  PLU=ON  CREATINE/CNS
                E NICOTINAMIDE/CN
                E NICOTINAMIDE/CNS
L45        33650 SEA ABB=ON  PLU=ON  NICOTINAMIDE/CNS

     FILE 'HCAPLUS' ENTERED AT 12:12:40 ON 01 SEP 2006
L46        24327 SEA ABB=ON  PLU=ON  L44
L47       120750 SEA ABB=ON  PLU=ON  L45
L48           23 SEA ABB=ON  PLU=ON  L31 AND (L46 OR L47)

     FILE 'REGISTRY' ENTERED AT 12:14:26 ON 01 SEP 2006
L49          621 SEA ABB=ON  PLU=ON  CREATINE
L50            1 SEA ABB=ON  PLU=ON  CREATINE/CN
L51            1 SEA ABB=ON  PLU=ON  NICOTINAMIDE/CN

     FILE 'HCAPLUS' ENTERED AT 12:14:53 ON 01 SEP 2006
L52         6355 SEA ABB=ON  PLU=ON  L50
L53         9424 SEA ABB=ON  PLU=ON  L51
L54         2023 SEA ABB=ON  PLU=ON  ((L50 OR L51)) (L) L20

     FILE 'STNGUIDE' ENTERED AT 12:16:05 ON 01 SEP 2006

     FILE 'HCAPLUS' ENTERED AT 12:19:21 ON 01 SEP 2006
L55            9 SEA ABB=ON  PLU=ON  L54 AND L31

     FILE 'STNGUIDE' ENTERED AT 12:27:53 ON 01 SEP 2006

     FILE 'HCAPLUS' ENTERED AT 12:36:54 ON 01 SEP 2006
                E PHOSPHORYLATION+ALL/CT
L56       194670 SEA ABB=ON  PLU=ON  ?PHOSPHORYLAT?/BI
L57            9 SEA ABB=ON  PLU=ON  L31 AND L56
                D SCA
L58          104 SEA ABB=ON  PLU=ON  L36 AND L56
L59              QUE ABB=ON  PLU=ON  SALT#/BI
L60            6 SEA ABB=ON  PLU=ON  L58 AND L59
L61              QUE ABB=ON  PLU=ON  (?VIRAL? OR ?BACTER? OR ?FUNGAL? OR
                 ?FUNGI? OR ?PARASIT? OR HIV OR AIDS OR ALZHEIM? OR ?DEMENTIA?
                 OR ?ANGIOGEN? OR ?CANCER? OR ?CARCINO? OR ?NEOPLAS? OR ?TUMOR?
                 OR ?APHTHOUS ULCER? OR ?ASTHMA? OR ATOPIC DERMATIT? OR
                 ?PSORIA?)/BI
L62           84 SEA ABB=ON  PLU=ON  L31 AND L61
L63              QUE ABB=ON  PLU=ON  (?VIRAL? OR ?BACTER? OR ?FUNGAL? OR
                 ?FUNGI? OR ?PARASIT? OR HIV OR AIDS OR ALZHEIM? OR ?DEMENTIA?
                 OR ?ANGIOGEN? OR ?CANCER? OR ?CARCINO? OR ?NEOPLAS? OR ?TUMOR?
                 OR ?APHTHOUS ULCER? OR ?ASTHMA? OR ATOPIC DERMATIT? OR
                 ?PSORIA?)/OBI
L64           65 SEA ABB=ON  PLU=ON  L31 AND L63
L65              QUE ABB=ON  PLU=ON  (BENIGN PROSTAT? HYPERTROPH?/OBI OR BLOOD
                 SUBSTITUT?/OBI OR BREAST CANCER/OBI OR ?CACHEXIA?/OBI OR
                 ?PNEUMONIA?/OBI OR STD#/OBI OR SEXUAL? TRANSMIT?/OBI OR
                 CANDIDA ALBICIAN?/OBI OR PARKINSON?/OBI OR PENTUMORAL BRAIN
                 EDEM?/OBI OR (RAGWEED/OBI (3A) ?ALLERG?/OBI))
L66            8 SEA ABB=ON  PLU=ON  L31 AND L65
                D STAT QUE L65
L67              QUE ABB=ON  PLU=ON  RENAL DISEAS?/OBI OR KIDNEY DISEAS?/OBI OR
                 RESTENOSIS/OBI OR ?RHEUMATOID?/OBI OR ALLERG?/OBI OR ROTAVIRUS/
                 OBI OR SEPTIC SHOCK/OBI OR ?TUMOR?/OBI OR ?TUMOUR?/OBI OR
                 STROKE/OBI OR ?THROMBOSIS?/OBI OR ?DIABET?/OBI
L68           28 SEA ABB=ON  PLU=ON  L31 AND L67
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L24      346070 SEA ABB=ON  PLU=ON  A2/PG
L25           1 SEA ABB=ON  PLU=ON  L18 AND (L23 OR L24)
                D SCA

     FILE 'HCAPLUS' ENTERED AT 11:48:45 ON 01 SEP 2006
L26           0 SEA ABB=ON  PLU=ON  L25

     FILE 'REGISTRY' ENTERED AT 11:49:08 ON 01 SEP 2006
                D L25 IDE

     FILE 'STNGUIDE' ENTERED AT 11:49:52 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 11:49:56 ON 01 SEP 2006
L27        1629 SEA ABB=ON  PLU=ON  L17 NOT L18
L28         669 SEA ABB=ON  PLU=ON  L27 AND (L23 OR L24)
L29          21 SEA ABB=ON  PLU=ON  L3 AND (L23 OR L24)
                D SCA
L30         669 SEA ABB=ON  PLU=ON  (L28 OR L29)

     FILE 'HCAPLUS' ENTERED AT 11:52:56 ON 01 SEP 2006
L31         226 SEA ABB=ON  PLU=ON  L30 (L) L20
L32           2 SEA ABB=ON  PLU=ON  US200!-643080/APPS
                D SCA
                SEL RN

     FILE 'REGISTRY' ENTERED AT 11:55:37 ON 01 SEP 2006
L33           4 SEA ABB=ON  PLU=ON  (113-24-6/BI OR 127-17-3/BI OR 57-00-1/BI
                OR 98-92-0/BI)
                D SCA

     FILE 'HCAPLUS' ENTERED AT 11:57:05 ON 01 SEP 2006
                SEL IT L32
                D COST
                D COST FULL
                D COST
                D COST FULL
L*** DEL 132930 S E5

     FILE 'STNGUIDE' ENTERED AT 12:00:19 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 12:01:36 ON 01 SEP 2006
L34           1 SEA ABB=ON  PLU=ON  L30 AND L33
                D SCA

     FILE 'STNGUIDE' ENTERED AT 12:01:50 ON 01 SEP 2006

     FILE 'HCAPLUS' ENTERED AT 12:02:33 ON 01 SEP 2006
L35       50015 SEA ABB=ON  PLU=ON  L17
L36        2255 SEA ABB=ON  PLU=ON  (L3 OR L17) (L) L20
L37       27352 SEA ABB=ON  PLU=ON  ?NICOTINAMID?/BI
L38           5 SEA ABB=ON  PLU=ON  ?NICATINAMID?/BI
L39       99387 SEA ABB=ON  PLU=ON  ?CREATIN?/BI
L40         117 SEA ABB=ON  PLU=ON  L36 AND (L37 OR L38 OR L39)
L41        4550 SEA ABB=ON  PLU=ON  ((L37 OR L38 OR L39)) (L) L20
L42          79 SEA ABB=ON  PLU=ON  L36 AND L41
L43           6 SEA ABB=ON  PLU=ON  L42 AND L31
                D SCA

     FILE 'REGISTRY' ENTERED AT 12:10:33 ON 01 SEP 2006
                E CREATIN/CN
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Search history


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=> d his full

     (FILE 'HOME' ENTERED AT 10:32:50 ON 01 SEP 2006)

     FILE 'REGISTRY' ENTERED AT 10:57:33 ON 01 SEP 2006
                ACT HAN080STRA/A
               ---------
L1              STR
L2              SCR 2040
L3          389 SEA SSS FUL L1 AND L2
               ---------

     FILE 'STNGUIDE' ENTERED AT 11:02:21 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 11:07:53 ON 01 SEP 2006
L4              STRUCTURE UPLOADED
L5           23 SEA SSS SAM L4
                D SCA

     FILE 'STNGUIDE' ENTERED AT 11:11:15 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 11:13:27 ON 01 SEP 2006
L6              STRUCTURE UPLOADED
L7            0 SEA SSS SAM L4 AND L6

     FILE 'STNGUIDE' ENTERED AT 11:14:47 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 11:17:49 ON 01 SEP 2006
L8              STRUCTURE UPLOADED
L9            50 SEA SSS SAM L8
L10        24561 SEA SSS FUL L8
                SAVE TEMP L10 HAN080STRC/A
L11        22016 SEA ABB=ON  PLU=ON  L10 AND NC=1
L12         2545 SEA ABB=ON  PLU=ON  L10 NOT L11
L13          668 SEA ABB=ON  PLU=ON  L12 AND NA>0

     FILE 'STNGUIDE' ENTERED AT 11:26:07 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 11:27:17 ON 01 SEP 2006
L14         1877 SEA ABB=ON  PLU=ON  L12 NOT L13

     FILE 'STNGUIDE' ENTERED AT 11:29:31 ON 01 SEP 2006

     FILE 'REGISTRY' ENTERED AT 11:37:39 ON 01 SEP 2006
L15             STRUCTURE UPLOADED
L16           50 SEA SUB=L10 SSS SAM L15
                D STAT QUE L16
L17         7632 SEA SUB=L10 SSS FUL L15
                SAVE TEMP HAN080STRD/A L17
L*** DEL     389 S L17 AND L3
L18         6003 SEA ABB=ON  PLU=ON  L17 AND NC=1
L19          114 SEA ABB=ON  PLU=ON  L18 AND M>0

     FILE 'HCAPLUS' ENTERED AT 11:44:25 ON 01 SEP 2006
L20             QUE ABB=ON  PLU=ON  (THU OR BAC OR PKT OR PAC OR DMA)/RL
L21           18 SEA ABB=ON  PLU=ON  L19 (L) L20

     FILE 'REGISTRY' ENTERED AT 11:46:24 ON 01 SEP 2006
L*** DEL       0 S A1/PQ
L23       549863 SEA ABB=ON  PLU=ON  A1/PG
```

AU 9887312	A1	19990208	AU 1998-87312	19980702
AU 725505	B2	20001012		
EP 993433	A1	20000419	EP 1998-938682	19980702
EP 993433	B1	20030205		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE				
TR 200000018	T2	20000721	TR 2000-200000018	19980702
BR 9810702	A	20000808	BR 1998-10702	19980702
NZ 501771	A	20001027	NZ 1998-501771	19980702
JP 2002507998	T2	20020312	JP 1999-508097	19980702
AT 232195	E	20030215	AT 1998-938682	19980702
ES 2189216	T3	20030701	ES 1998-938682	19980702
ZA 9805908	A	19990223	ZA 1998-5908	19980706
MX 9911864	A	20000531	MX 1999-11864	19991216
NO 2000000122	A	20000110	NO 2000-122	20000110
US 6342631	B1	20020129	US 2000-651638	20000830
PRIORITY APPLN. INFO.:			DE 1997-19729786	A 19970711
			US 1997-955838	A 19971021
			WO 1998-EP4089	W 19980702
			US 1998-163117	B1 19980929

OTHER SOURCE(S): CASREACT 130:95309

AB High-purity calcium pyruvates, with varying degrees of hydration, useful for body weight or fat reduction (no data), as a cell free-radical inhibitor (no data), or a food additive (no data), is prepared by the reaction of pyruvic acid with a calcium salt of an organic acid (e.g., calcium acetate), a calcium salt of a ketocarboxylic acid, or a calcium salt of a hydroxyorg. acid at -20° to +120° optionally in the presence of a solvent (e.g., Et acetate).

IC ICM C07C059-19
ICS C07C051-41; C07C051-42; A61K031-19; A23L001-30

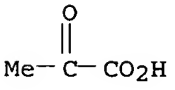
CC 23-16 (Aliphatic Compounds)
Section cross-reference(s): 1, 17

IT **52009-14-0P**, Calcium pyruvate
RL: BUU (Biological use, unclassified); **FFD (Food or feed use)**; IMF (Industrial manufacture); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for preparation of calcium pyruvates by the neutralization of pyruvic acid with calcium salts of organic acids)

IT **52009-14-0P**, Calcium pyruvate
RL: BUU (Biological use, unclassified); **FFD (Food or feed use)**; IMF (Industrial manufacture); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for preparation of calcium pyruvates by the neutralization of pyruvic acid with calcium salts of organic acids)

RN 52009-14-0 HCAPLUS

CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

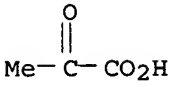
L102 ANSWER 62 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:34477 HCAPLUS
DOCUMENT NUMBER: 130:105332
TITLE: Therapeutic antiviral-wound healing compositions and methods for preparing and using them
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner Lambert Company, USA
SOURCE: U.S., 64 pp., Cont.-in-part of U.S. Ser. No. 224,936, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5856364	A	19990105	US 1995-410079	19950329
JP 2002356421	A2	20021213	JP 2002-82387	19920115
JP 2003231632	A2	20030819	JP 2002-362245	19920115
CA 2184617	AA	19951019	CA 1995-2184617	19950405
WO 9527501	A1	19951019	WO 1995-US4201	19950405
W: AU, CA, JP, MX, NZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9522402	A1	19951030	AU 1995-22402	19950405
AU 698682	B2	19981105		
EP 754052	A1	19970122	EP 1995-915557	19950405
EP 754052	B1	20021211		
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI				
JP 09511746	T2	19971125	JP 1995-526421	19950405
ES 2188656	T3	20030701	ES 1995-915557	19950405
ZA 9502911	A	19960828	ZA 1995-2911	19950407
US 5981606	A	19991109	US 1998-19316	19980205

PRIORITY APPLN. INFO.:		
US 1991-663500	B1	19910301
US 1993-53922	B2	19930426
US 1994-224936	B2	19940408
JP 1992-505329	A3	19920115
US 1995-410079	A	19950329
WO 1995-US4201	W	19950405
US 1997-37730P	P	19970202

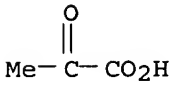
AB The invention pertains to therapeutic wound healing compns. for protecting and resuscitating mammalian cells (Embodiment I). The invention also pertains to therapeutic antiviral-wound healing compns. for reducing viral titers and increasing the proliferation and resuscitation rate of mammalian cells (Embodiment II). In a first aspect of Embodiment I (I.A), the therapeutic wound healing composition comprises (a) pyruvate, (b) an antioxidant, and (c) a mixture of saturated and unsatd. fatty acids. In a second aspect of Embodiment I (I.B), the therapeutic wound healing composition comprises (a) pyruvate, (b) lactate, and (c) a mixture of saturated and unsatd. fatty acids. In a third aspect of Embodiment I (I.C), the therapeutic wound healing composition comprises (a) an antioxidant and (b) a mixture of saturated and unsatd. fatty acids. In a fourth aspect of Embodiment I (I.D), the therapeutic wound healing composition comprises (a) lactate, (b) an antioxidant, and (c) a mixture of saturated and unsatd. fatty acids. In Embodiment II, the therapeutic wound healing compns. of Embodiment One (I.A-D) are combined with a therapeutically effective amount of an antiviral agent (V) to form antiviral-wound healing compns. (II.A-D+V). The invention also pertains to methods for preparing and using the antiviral-wound healing compns. and the topical and ingestible

pharmaceutical products in which the therapeutic compns. may be used.
IC ICM A61K031-045
ICS A61K031-355
INCL 514724000
CC 1-12 (Pharmacology)
Section cross-reference(s): 63
IT Anesthetics
Anti-inflammatory agents
Antibacterial agents
Antihistamines
Antimicrobial agents
Antiviral agents
Cytoprotective agents
Disinfectants
Drug delivery systems
Fungicides
Human herpesvirus 1
Human herpesvirus 2
Immunostimulants
Monocyte
Sunscreens
Wound healing promoters
(antiviral-wound healing compns. and methods)
IT 50-21-5, biological studies 50-81-7, Vitamin C, biological studies 57-10-3, Palmitic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 58-95-7, Vitamin E acetate 60-33-3, Linoleic acid, biological studies 108-95-2, Phenol, biological studies 112-80-1, Oleic acid, biological studies **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, salts 143-07-7, Dodecanoic acid, biological studies 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 463-40-1, Linolenic acid 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Tetradecanoic acid, biological studies 544-64-9, Myristoleic acid 600-22-6, Methyl pyruvate 665-66-7, Amantadine hydrochloride 1002-84-2, Pentadecanoic acid 1406-18-4, Vitamin E 1406-18-4D, Vitamin E, esters 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate 5536-17-4, Vidarabine 11103-57-4, Vitamin A **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate 29204-02-2, Gadoleic acid 30516-87-1, Zidovudine 36791-04-5, Ribavirin **52009-14-0**, Calcium pyruvate 59277-89-3, Acyclovir 63585-09-1, Foscarnet sodium 107910-75-8, Ganciclovir sodium 145482-34-4, Manganese pyruvate 219562-21-7, Preparation H
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral-wound healing compns. and methods)
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral-wound healing compns. and methods)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



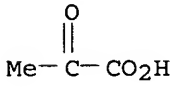
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



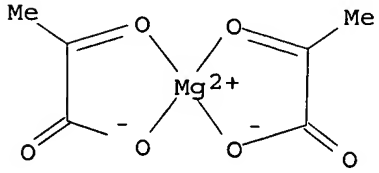
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

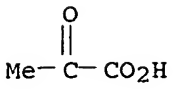


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 63 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:761802 HCAPLUS
DOCUMENT NUMBER: 130:20594
TITLE: Pyruvate compounds for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use
INVENTOR(S): Brunengraber, Henri; Bomont, Catherine; David, France; Hallowell, Peter T.; Cooper, Kevin D.; Kasoumov, Takhar
PATENT ASSIGNEE(S): Case Western Reserve University, USA
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9851277	A1	19981119	WO 1998-US9729		19980513
W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GH, GM, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
US 6086789	A	20000711	US 1998-76374		19980512
CA 2289704	AA	19981119	CA 1998-2289704		19980513
AU 9874835	A1	19981208	AU 1998-74835		19980513
AU 743136	B2	20020117			
EP 1009377	A1	20000621	EP 1998-922239		19980513
R: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE					
JP 2001526663	T2	20011218	JP 1998-549470		19980513

PRIORITY APPLN. INFO.:

US 1997-46343P	P	19970513
US 1998-80695P	P	19980403
US 1998-76374	A	19980512
US 1996-617285	A2	19960318
US 1997-807585	A2	19970227
WO 1998-US9729	W	19980513

OTHER SOURCE(S): MARPAT 130:20594

AB Pyruvate compds. are disclosed which are suitable for cosmetically or dermatol. administering to the skin and for use in treating diabetic ketosis or other medical treatments. The compds. include pyruvate thioesters, a dihydroxyacetone-pyruvate, and an ester of pyruvate with a sugar or a polyol.

IC ICM A61K007-48
ICS A61K031-22
CC 1-12 (Pharmacology)
Section cross-reference(s): 23, 62, 63
ST pyruvate compd prepn skin pharmaceutical cosmetic; **diabetic** ketosis treatment pyruvate compd; thioester ester pyruvate skin pharmaceutical cosmetic **diabetic** ketosis treatment; sugar ester pyruvate skin pharmaceutical cosmetic **diabetic** ketosis treatment; polyol ester pyruvate skin pharmaceutical cosmetic **diabetic** ketosis treatment
IT Skin, disease
(aging, disorder, photoaging; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Carbohydrates, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aldoses, esters with pyruvate; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Oxidation
(biol., ethanol; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Temperature effects, biological
(cold, skin condition from; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT **Diabetes** mellitus
(**diabetic** ketosis; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Temperature effects, biological
(heat, skin condition from; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Heart, disease
(infarction; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Skin, **neoplasm**
Skin, **neoplasm**
(inhibitors; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Skin, disease
Skin, disease
(injury; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Carbohydrates, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ketoses, esters with pyruvate; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)
IT Ketone bodies
(ketosis, **diabetic**; pyruvate compds. for treatment of skin

illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT UV radiation
(melanocytic response; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Skin, disease
(photoaging; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Alcohols, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyhydric, esters, with pyruvate; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Aging, animal
Anti-inflammatory agents
Autoimmune disease
Cardiovascular agents
Cosmetics
Dermatitis
Melanocyte
Radiation
Skin, disease
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Ketone bodies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Chemicals
Wind
(skin condition from; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Skin
(skin health promotion; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Antitumor agents
Antitumor agents
(skin; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Carbohydrates, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sugar esters, with pyruvate; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT Drug delivery systems
(topical; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT 64-17-5, Ethanol, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(oxidation; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT 96-26-4, Dihydroxyacetone **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT 196495-03-1P 197372-38-6P 197392-57-7P 197392-58-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT 127-17-3D, Pyruvic acid, esters and thioesters 197372-33-1 197372-34-2 197372-36-4D, alkyl esters 197372-37-5 197372-39-7 216243-81-1 216252-23-2, Glucose pyruvate ester 216252-24-3, Ribose pyruvate ester 216252-25-4, Fructose pyruvate ester
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT 50-21-5, biological studies 50-99-7, D-Glucose, biological studies 56-81-5, 1,2,3-Propanetriol, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

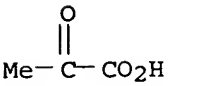
IT 196495-05-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT 127-17-3, Pyruvic acid, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(reaction; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT 106-61-6 5704-66-5, Pyruvoyl chloride 16649-49-3 25395-31-7, Diacetylglycerol 52737-02-7 59587-09-6, N-Acetyl-L-cysteine ethyl ester 196495-07-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic use)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(pyruvate compds. for treatment of skin illness or injury, **diabetic** ketosis, and other medical conditions and for cosmetic

use)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 64 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:572298 HCAPLUS
DOCUMENT NUMBER: 129:197992
TITLE: Method and composition using antioxidant inflammatory response mediators for treating mammalian diseases caused by inflammatory response
INVENTOR(S): Katz, Stanley E.
PATENT ASSIGNEE(S): Cellular Sciences, Inc., USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 5798388	A	19980825	US 1996-709043		19960906
US 5939459	A	19990817	US 1998-40679		19980318
US 5952384	A	19990914	US 1998-40678		19980318
US 6482856	B1	20021119	US 1999-348698		19990707
PRIORITY APPLN. INFO.:			US 1995-3962P	P	19950919
			US 1996-709043	A3	19960906
			US 1998-40679	A1	19980318

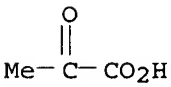
AB A method for treating the disease state in mammals caused by mammalian cells involved in the inflammatory response is disclosed. Mammalian cells participating in the inflammatory response are contacted with an inflammatory response mediator which reduces the undesired inflammatory response and is an antioxidant. The inflammatory response mediator may further provide a cellular energy source and be a building block in the cellular synthesis of other cellular components. Compns. for reducing and treating undesired inflammatory response are also disclosed. The inflammatory response mediator is e.g. pyruvic acid or a salt or precursor thereof. A method for treating asthma is specifically claimed.
IC ICM A61K031-19
ICS A61K031-22
INCL 514557000
CC 1-7 (Pharmacology)
ST antioxidant inflammatory response mediator therapeutic; pyruvate inflammatory response mediator; **asthma** treatment antioxidant inflammatory response mediator
IT Antibacterial agents
Antihistamines

Antiviral agents
Drugs
Fungicides
(antioxidant inflammatory response mediators and other therapeutic agents for treating mammalian diseases caused by inflammatory response)

IT **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, salts and precursors 631-66-3, Pyruvamide 2392-63-4 **2922-61-4**, Lithium pyruvate 3997-91-9 **4151-33-1**, Potassium pyruvate 16947-06-1 18559-94-9, Albuterol **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 90088-56-5 145482-34-4, Manganese pyruvate 152102-61-9
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antioxidant inflammatory response mediators for treating mammalian diseases caused by inflammatory response)

IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antioxidant inflammatory response mediators for treating mammalian diseases caused by inflammatory response)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



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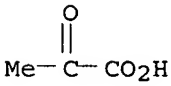
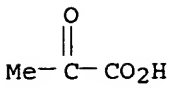
RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



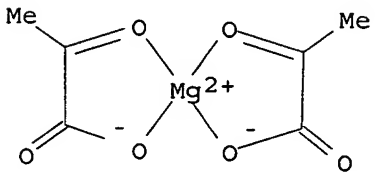
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

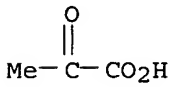


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 65 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:543187 HCAPLUS
DOCUMENT NUMBER: 129:172759
TITLE: The use of NADPH and NADH analogs in the measurement of enzyme activities and metabolites
INVENTOR(S): Kaufman, Richard A.
PATENT ASSIGNEE(S): Specialty Assays, Inc., USA
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9833936	A1	19980806	WO 1998-US1890	19980203

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA,

UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5801006	A	19980901	US 1997-795283		19970204
CA 2278850	AA	19980806	CA 1998-2278850		19980203
AU 9862598	A1	19980825	AU 1998-62598		19980203
AU 742386	B2	20020103			
EP 973938	A1	20000126	EP 1998-904810		19980203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
NZ 336841	A	20010330	NZ 1998-336841		19980203
JP 2001526528	T2	20011218	JP 1998-533147		19980203
PRIORITY APPLN. INFO.:			US 1997-795283	A	19970204
			WO 1998-US1890	W	19980203

OTHER SOURCE(S): MARPAT 129:172759

AB Kits and methods for measuring enzyme activities and metabolites using NADH and NADPH analogs are disclosed. The analogs have extended stability in aqueous solns. and can be used as replacements for NADH or NADPH cofactors in anal. procedures. Preferred aspects of the invention include kits containing the NADH and NADPH analogs for use in the measurement of ALT activity, AST activity, urea, ammonia, salicylate, triglycerides, pyruvic acid, sorbitol dehydrogenase activity, 5'-nucleotidase activity, creatine kinase activity, 2,3-diphosphoglyceric acid, ATP, α-hydroxybutyrate dehydrogenase activity, lactate dehydrogenase activity and the carbon dioxide content in anal. samples. 3-Acetylpyridine-NADH was used in the determination of ALT activity.

IC ICM C12Q001-48
ICS C12Q001-00; C12Q001-34; C12Q001-58; C12Q001-42; C12Q001-54; C12Q001-37; C12Q001-50; C12Q001-32; G01N033-53; C07H019-04

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 7, 26

IT 56-65-5, Adenosine 5'-triphosphate, analysis **127-17-3**, Pyruvic acid, analysis 9001-60-9, Lactate dehydrogenase
RL: ANT (Analyte); ARG (Analytical reagent use); **THU (Therapeutic use)**; ANST (Analytical study); BIOL (Biological study); USES (Uses)
(determination of or diagnostic reagent kit component; NADPH and NADH analogs
for measurement of enzyme activities and metabolites)

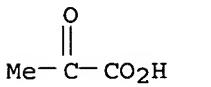
IT 57-13-6, Urea, analysis 63-36-5D, Salicylate, derivs., analysis 124-38-9, Carbon dioxide, analysis 138-81-8, 2,3-Diphosphoglyceric acid 7664-41-7, Ammonia, analysis 9000-86-6, Alanine aminotransferase 9000-97-9, Aspartate aminotransferase 9001-15-4, **Creatine** kinase 9027-73-0, 5'-Nucleotidase 9028-21-1, Sorbitol dehydrogenase 9067-92-9, α-Hydroxybutyrate dehydrogenase
RL: ANT (Analyte); **THU (Therapeutic use)**; ANST (Analytical study); BIOL (Biological study); USES (Uses)
(determination of; NADPH and NADH analogs for measurement of enzyme activities
and metabolites)

IT 56-41-7, L-Alanine, biological studies 56-73-5, Glucose-6-phosphate 56-84-8, L-Aspartic acid, biological studies **57-00-1**, **Creatine** 57-48-7, Fructose, biological studies 58-64-0, Adenosine 5'-diphosphate, biological studies 61-19-8, Adenosine 5'-monophosphate, biological studies 81-25-4, Cholic acid 86-07-7, 3-Pyridinealdehyde-NAD 86-08-8, 3-Acetylpyridine-NAD 138-08-9, Phosphoenolpyruvic acid 153-59-3, 3-Acetylpyridine-NADH **305-72-6**, Disodium α-ketoglutarate **328-50-7** 471-47-6D, derivs. 565-73-1, Sodium oxamate 600-15-7 820-11-1 1921-48-8 2737-69-1 4090-29-3, **Thionicotinamide**-NAD 5263-47-8 7786-30-3,

Magnesium chloride, biological studies 7791-18-6 9001-40-5, Glucose-6-phosphate dehydrogenase 9001-50-7, Glyceraldehyde phosphate dehydrogenase 9001-59-6, Pyruvate kinase 9001-62-1, Lipase 9001-64-3, Malate dehydrogenase 9001-83-6 9002-13-5, Urease 9004-02-8, Lipoprotein lipase 9013-08-5, Phosphoenolpyruvate carboxylase 9026-93-1, Adenosine deaminase 9029-12-3, Glutamate dehydrogenase 9030-66-4, Glycerol kinase 9032-62-6, Phosphoglycerate mutase 9059-28-3, Salicylate hydroxylase 10526-80-4 13147-57-4, 2-Phosphoglycolic acid 17090-93-6, Sodium L-aspartate 38850-22-5 51963-61-2 77617-15-3 211361-41-0
RL: ARG (Analytical reagent use); **THU (Therapeutic use)**; ANST (Analytical study); BIOL (Biological study); USES (Uses)
(diagnostic reagent kit component; NADPH and NADH analogs for measurement of enzyme activities and metabolites)

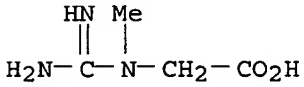
IT **127-17-3**, Pyruvic acid, analysis
RL: ANT (Analyte); ARG (Analytical reagent use); **THU (Therapeutic use)**; ANST (Analytical study); BIOL (Biological study); USES (Uses)
(determination of or diagnostic reagent kit component; NADPH and NADH analogs for measurement of enzyme activities and metabolites)

RN 127-17-3 HCAPLUS
CN Propanoic acid, 2-oxo- (9CI) (CA INDEX NAME)

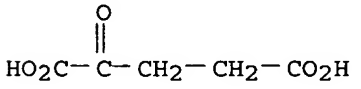


IT **57-00-1**, **Creatine** **305-72-6**, Disodium α-ketoglutarate **328-50-7**
RL: ARG (Analytical reagent use); **THU (Therapeutic use)**; ANST (Analytical study); BIOL (Biological study); USES (Uses)
(diagnostic reagent kit component; NADPH and NADH analogs for measurement of enzyme activities and metabolites)

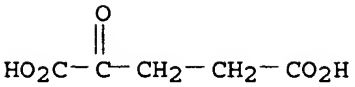
RN 57-00-1 HCAPLUS
CN Glycine, N-(aminoiminomethyl)-N-methyl- (9CI) (CA INDEX NAME)



RN 305-72-6 HCAPLUS
CN Pentanedioic acid, 2-oxo-, disodium salt (9CI) (CA INDEX NAME)

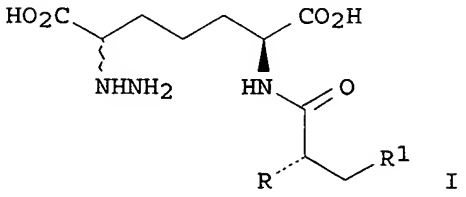


RN 328-50-7 HCAPLUS
CN Pentanedioic acid, 2-oxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 66 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:310428 HCAPLUS
DOCUMENT NUMBER: 129:54551
TITLE: Peptide inhibitors of N-succinyl diaminopimelic acid aminotransferase (DAP-AT): a novel class of antimicrobial compounds
AUTHOR(S): Cox, Russell J.; Schouten, James A.; Stentiford, Rosie A.; Wareing, Katrina J.
CORPORATE SOURCE: School of Chemistry, University of Bristol, Bristol, BS8 1TS, UK
SOURCE: Bioorganic & Medicinal Chemistry Letters (1998), 8(8), 945-950
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Dipeptide substrates of N-succinyldiaminopimelic acid aminotransferase (DAP-AT) (EC 2.6.1.17) were converted to hydrazines I (R = H, AcNH, R1 = CO2H; R = AcNH, R1 = Ph) by treatment with hydrazine and cyanoborohydride. These compds. were tested in vitro as inhibitors of DAP-AT from E. coli and in vivo as antibiotics. The hydrazino-dipeptides showed potent slow binding inhibition of DAP-AT as well as antimicrobial activity.

CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1, 7, 10

ST **bactericide** hydrazino diaminopimelate peptide prepn; aminotransferase succinyldiaminopimelate inhibitor hydrazinopimelate dipeptide prepn

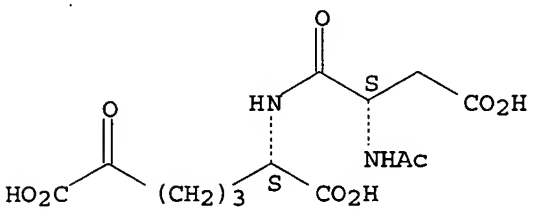
IT **208645-71-0P 208645-72-1P**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of hydrazino peptides as succinyldiaminopimelic acid aminotransferase inhibitors and antibiotics)

IT **208645-71-0P 208645-72-1P**
RL: **BAC (Biological activity or effector, except adverse)**; BSU

(Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of hydrazino peptides as succinyldiaminopimelic acid aminotransferase inhibitors and antibiotics)

RN 208645-71-0 HCAPLUS
CN L-Norleucine, N-acetyl-L-α-aspartyl-6-carboxy-6-oxo-, trilithium salt (9CI) (CA INDEX NAME)

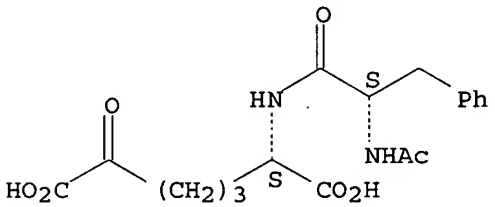
Absolute stereochemistry.



●3 Li

RN 208645-72-1 HCAPLUS
CN L-Norleucine, N-acetyl-L-phenylalanyl-6-carboxy-6-oxo-, dilithium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



●2 Li

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 67 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:118600 HCAPLUS
DOCUMENT NUMBER: 128:153491
TITLE: Composition of pyruvate and protein and method for increasing protein concentration in a mammal
INVENTOR(S): Beale, Paxton K.; Nickey, Donald O.
PATENT ASSIGNEE(S): Beale, Paxton K., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5716926	A	19980210	US 1996-686819	19960726
CA 2261708	AA	19980205	CA 1997-2261708	19970725
WO 9804254	A1	19980205	WO 1997-US13162	19970725
W: AT, BG, BR, CA, CH, CN, CZ, DE, DK, ES, FI, GB, LU, MX, PL, PT, RO, RU, SE, SK, UA				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 914109	A1	19990512	EP 1997-938052	19970725
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9710586	A	20000321	BR 1997-10586	19970725
US 5889040	A	19990330	US 1997-951547	19971016
US 6008252	A	19991228	US 1998-71008	19980501
US 6221836	B1	20010424	US 1998-213968	19981217

PRIORITY APPLN. INFO.:	US 1996-686819	A	19960726
	US 1996-686820	A2	19960726
	WO 1997-US13162	W	19970725
	US 1997-951547	A2	19971016

AB The present invention is based in part upon the discovery that the use of pyruvate in enteral formulations, in combination with an anabolic protein composition, produces a synergistic effect in increasing the lean body mass or muscle tissue of a mammal consuming same. The present invention also provides a method for enhanced endurance of athletes. The present invention relates generally to a composition for enhancing the protein concentration or muscle mass of a mammal and a method for enhancing the protein concentration or muscle mass in a mammal. More specifically, the present invention relates to a composition which comprises pyruvate and/or derivs. of pyruvate and an anabolic protein composition The method of the present invention comprises administering to a mammal in need of enhancing its protein concentration or muscle mass, a composition comprising pyruvate and an anabolic protein composition The pyruvate/anabolic protein composition can take the form of powders, liqs., pills, capsules, tablets, food additives, candies or confections.

IC ICM A23L001-305
ICS A61K031-19; A61K031-22; A61K038-01

INCL 514002000

CC 18-3 (Animal Nutrition)
Section cross-reference(s): 14, 17, 63

ST enteral formulation pyruvate amino acid; osteoporosis enteral formulation pyruvate amino acid; **AIDS** enteral formulation pyruvate amino acid; **cancer** enteral formulation pyruvate amino acid

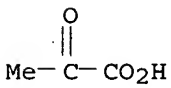
IT **AIDS** (disease)
Anabolic agents
Body weight
Candy
Confectionery
Drug delivery systems
Egg white
Food additives
Neoplasm
Osteoporosis
(composition of pyruvate and protein and method for increasing protein concentration in a mammal)

IT 51-35-4, L-Hydroxyproline 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological

studies 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, L-Cystine, biological studies 60-18-4, L-Tyrosine, biological studies 61-90-5, L-Leucine, biological studies 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies **113-24-6**, Sodium pyruvate 127-17-3D, Pyruvic acid, amide, ester or salt derivs, biological studies 147-85-3, L-Proline, biological studies 631-66-3D, Pyruvamide, derivs 2392-63-4 3997-91-9 **4151-33-1**, Potassium pyruvate 16947-06-1 **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate 68259-69-8 76391-12-3 90088-56-5 152102-61-9 155404-03-8
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(composition of pyruvate and protein and method for increasing protein concentration in a mammal)

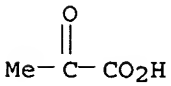
IT **113-24-6**, Sodium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(composition of pyruvate and protein and method for increasing protein concentration in a mammal)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



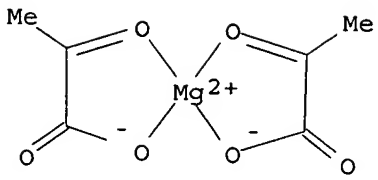
● Na

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

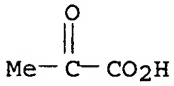


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 68 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:98317 HCAPLUS
DOCUMENT NUMBER: 128:172123
TITLE: Composition of pyruvate and anti-cortisol compounds and method for increasing protein concentration in a mammal
INVENTOR(S): Beale, Paxton K.
PATENT ASSIGNEE(S): Beale, Paxton K., USA
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9804253	A1	19980205	WO 1997-US13161	19970725
W: AT, BG, BR, CA, CH, CN, CZ, DE, DK, ES, FI, GB, LU, MX, PL, PT, RO, RU, SE, SK, UA				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5756469	A	19980526	US 1996-686820	19960726
CA 2261781	AA	19980205	CA 1997-2261781	19970725
EP 914108	A1	19990512	EP 1997-935137	19970725
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9710585	A	20001024	BR 1997-10585	19970725
US 5919767	A	19990706	US 1998-27522	19980223
PRIORITY APPLN. INFO.:			US 1996-686820 A	19960726
			WO 1997-US13161 W	19970725

AB The present invention is based, in part, upon the discovery that the use of pyruvate in combination with a cortisol blocker, such as phosphatidylserine, produces a synergistic effect in increasing lean body mass or muscle tissue, decreasing fat deposition, increasing endurance and athletic performance of a mammal consuming same. The invention also

relates to a method of treating the catabolic effects of diseases such as cancer and AIDS by the administration of pyruvate and a cortisol blocker. The present invention also discloses a synergistic composition comprising pyruvate and a cortisol blocker. More specifically, the present invention relates to a composition which comprises pyruvate and/or derivs. of pyruvate and phosphatidylserine.

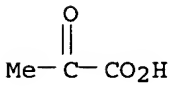
IC ICM A61K031-19
ICS A61K031-66; A61K045-06

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 18

IT 53-43-0, DHEA 56-86-0, Glutamic acid, biological studies 61-90-5, Leucine, biological studies **113-24-6**, Sodium pyruvate 145-13-1, Pregnenolone 625-08-1 631-66-3, Pyruvamide 1839-11-8, Conjugated linoleic acid 2392-63-4 3997-91-9, Pyruvoyl glycine **4151-33-1**, Potassium pyruvate 6020-87-7, **Creatine** monohydrate 16947-06-1 **18983-79-4**, Magnesium pyruvate 35212-22-7, Ipriflavone **52009-14-0**, Calcium pyruvate 68259-69-8 76391-12-3 90088-56-5 152102-61-9 155404-03-8
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(enteral synergistic compns. containing pyruvates and cortisol blockers for enhancing muscle mass)

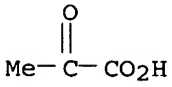
IT **113-24-6**, Sodium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(enteral synergistic compns. containing pyruvates and cortisol blockers for enhancing muscle mass)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



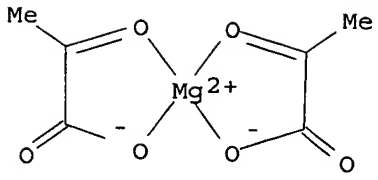
● Na

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

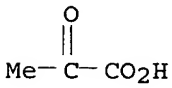


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L102 ANSWER 69 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:640631 HCAPLUS
DOCUMENT NUMBER: 127:303344
TITLE: Pyruvate compounds, their preparation, and methods for therapeutic use and as a foodstuff
INVENTOR(S): Brunengraber, Henri; Dugas, Hermann; Qunize, Khadija; Bomont, Catherine; David, France; Hallowell, Peter T.
PATENT ASSIGNEE(S): Case Western Reserve University, USA
SOURCE: PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9734856	A1	19970925	WO 1997-US4335	19970318
W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5667962	A	19970916	US 1996-617285	19960318
US 5876916	A	19990302	US 1997-807585	19970227
AU 9722164	A1	19971010	AU 1997-22164	19970318
AU 712702	B2	19991111		
EP 888267	A1	19990107	EP 1997-915150	19970318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001526628	T2	20011218	JP 1997-533639	19970318
PRIORITY APPLN. INFO.:			US 1996-617285 A	19960318
			US 1997-807585 A	19970227

US 1996-617255 A2 19960318
WO 1997-US4335 W 19970318

OTHER SOURCE(S): MARPAT 127:303344

AB Pyruvate compds. are disclosed for the treatment or prevention of reperfusion injury following ischemia, diabetic effects, cholesterol levels, injured organs, ethanol intoxication, or as a foodstuff. The pyruvate compound is particularly a pyruvate thiolester, a glycerol-pyruvate ester or a dihydroxyacetone-pyruvate ester. Pyruvate-N-acetylcysteine Et ester (preparation given) was effective in recovery of isolated rabbit hearts following catecholamine injury and improved function of preserved rat livers.

IC ICM C07C031-22
ICS C07C059-245; C07C059-285; C07C069-66; C07C229-30; A01N001-02

CC 1-12 (Pharmacology)
Section cross-reference(s): 18, 23

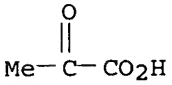
ST pyruvate compd prepn ischemia reperfusion injury; hypocholesteremic ethanol intoxication foodstuff pyruvate compd; thiolester pyruvate therapeutic foodstuff; glyceryl ester pyruvate therapeutic foodstuff; dihydroxyacetone ester pyruvate therapeutic foodstuff; **diabetes** pyruvate compd

IT 96-26-4, Dihydroxyacetone **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(pyruvate ester component effect on ethanol oxidation)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(pyruvate ester component effect on ethanol oxidation)

RN 113-24-6 HCAPLUS

CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



L102 ANSWER 70 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:625591 HCAPLUS
DOCUMENT NUMBER: 127:290229
TITLE: Hematopoietic cell culture nutrient supplement
INVENTOR(S): Daley, John P.; Dadey, Barbara M.; Biddle, William; Wysocki, Michelle G.
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9733978	A1	19970918	WO 1997-US1867	19970131

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,

DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

CA 2248142	AA	19970918	CA 1997-2248142		19970131
AU 9722600	A1	19971001	AU 1997-22600		19970131
EP 891419	A1	19990120	EP 1997-905789		19970131
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 2000507812	T2	20000627	JP 1997-532595		19970131
US 2001033835	A1	20011025	US 1997-792299		19970131
US 6733746	B2	20040511			
US 2004072349	A1	20040415	US 2003-716619		20031120
PRIORITY APPLN. INFO.:			US 1996-13149P	P	19960312
			US 1997-792299	A1	19970131
			WO 1997-US1867	W	19970131

AB The present invention provides a serum-free supplement which supports the growth of hematopoietic cells in culture. The supplement contains ≥1 ingredients selected from the group consisting of ≥1 antioxidant, ≥1 albumin or albumin substitute, ≥1 lipid agent, ≥1 insulin or insulin substitute, ≥1 transferrin or transferrin substitute, ≥1 trace element, and ≥1 glucocorticoid, wherein a basal cell culture medium supplemented with the supplement is capable of supporting the expansion of CD34+ hematopoietic cells and cells of myeloid lineage, in serum-free culture. The present invention also provides methods for culturing and for differentiating hematopoietic cells.

IC ICM C12N005-00
ICS A61K035-28

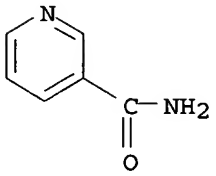
CC 9-11 (Biochemical Methods)
Section cross-reference(s): 13

IT 50-23-7, Hydrocortisone 50-99-7, D-Glucose, biological studies 51-35-4, L-Hydroxyproline 52-90-4, L-Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 58-85-5, Biotin 59-30-3, Folic acid, biological studies 59-43-8, Thiamin, biological studies 60-18-4, L-Tyrosine, biological studies 60-24-2, 2-Mercaptoethanol 61-90-5, L-Leucine, biological studies 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 66-72-8, Pyridoxal 67-48-1, Choline chloride 68-19-9, Vitamin B12 70-47-3, L-Asparagine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies 83-88-5, Riboflavin, biological studies 87-89-8, i-Inositol **98-92-0**, Niacinamide **113-24-6**, Sodium pyruvate 127-17-3D, Pyruvic acid, salts 137-08-6, Calcium D-pantothenate 141-43-5, biological studies 143-74-8, Phenol red 144-55-8, Carbonic acid monosodium salt, biological studies 147-85-3, L-Proline, biological studies 616-91-1, N-Acetyl-L-cysteine 3812-32-6, Carbonate, biological studies 3812-32-6D, Carbonate, salts, biological studies 7365-45-9, HEPES 7439-95-4, Magnesium, biological studies 7439-95-4D, Magnesium, salts, biological studies 7440-09-7, Potassium, biological studies 7440-09-7D, Potassium, salts, biological studies 7440-23-5, Sodium,

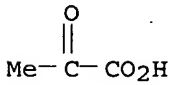
biological studies 7440-23-5D, Sodium, salts, biological studies 7440-70-2, Calcium, biological studies 7440-70-2D, Calcium, salts, biological studies 7447-40-7, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies 7558-80-7, Sodium dihydrogen phosphate 7647-14-5, Sodium chloride (NaCl), biological studies 7757-79-1, Potassium nitrate, biological studies 7782-49-2, Selenium, biological studies 8049-62-5, Zinc insulin 9004-10-8, Insulin, biological studies 10043-52-4, Calcium chloride (CaCl2), biological studies 10102-18-8, Sodium selenite 11096-26-7, Erythropoietin 14265-44-2, Phosphate, biological studies 14265-44-2D, Phosphate, salts, biological studies 52225-20-4 83869-56-1, Granulocyte/macrophage colony-stimulating factor 143011-72-7, Granulocyte-colony-stimulating factor
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hematopoietic cell culture nutrient supplement)

IT **98-92-0**, Niacinamide **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hematopoietic cell culture nutrient supplement)

RN 98-92-0 HCAPLUS
CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

L102 ANSWER 71 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:597475 HCAPLUS
DOCUMENT NUMBER: 127:253193
TITLE: Antifungal wound healing compositions
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: U.S., 41 pp., Cont.-in-part of U. S. Ser. No. 279,462, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5663208	A	19970902	US 1995-445831	19950522
JP 2002356421	A2	20021213	JP 2002-82387	19920115
JP 2003231632	A2	20030819	JP 2002-362245	19920115
CA 2191603	AA	19960208	CA 1995-2191603	19950707
WO 9603149	A1	19960208	WO 1995-US8551	19950707
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9530042	A1	19960222	AU 1995-30042	19950707
AU 701179	B2	19990121		
EP 773795	A1	19970521	EP 1995-926203	19950707
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI				
JP 10503200	T2	19980324	JP 1995-505755	19950707
NZ 290029	A	20010223	NZ 1995-290029	19950707
ZA 9506117	A	19970421	ZA 1995-6117	19950721
US 5981606	A	19991109	US 1998-19316	19980205
PRIORITY APPLN. INFO.:			US 1991-663500	B1 19910301
			US 1993-53922	B2 19930426
			US 1994-279462	B2 19940722
			JP 1992-505329	A3 19920115
			US 1994-224936	B1 19940408
			US 1995-445831	A 19950522
			WO 1995-US8551	W 19950707
			US 1997-37730P	P 19970202

AB This invention pertains to therapeutic antifungal-wound healing compns. The compns. comprise a therapeutically effective amount of an antifungal agent and a wound healing compns. In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic antifungal-wound healing compns. may be utilized in a wide variety of topical and ingestible pharmaceutical products. This invention also relates to methods for preparing and using the therapeutic antifungal-wound healing compns. and the pharmaceutical products in which the compns. may be used.

IC ICM A61K033-22
ICS A61K031-045; A61K047-60; A61K031-36

INCL 514724000

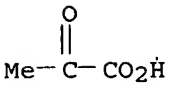
CC 63-6 (Pharmaceuticals)

IT Anti-inflammatory agents
Drug delivery systems
Fungicides
Wound healing promoters
(antifungal wound healing compns.)

IT 50-21-5, Lactic acid, biological studies 110-44-1, Sorbic acid **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 328-50-7, α-Ketoglutaric acid 600-22-6, Methyl pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate 22916-47-8, Miconazole 23593-75-1, Clotrimazole 24887-16-9, Zinc pyruvate 25655-41-8, Povidone iodine **52009-14-0**, Calcium pyruvate 64872-76-0, Butoconazole 65899-73-2, Tioconazole 67915-31-5, Terconazole 145482-34-4, Manganese pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antifungal wound healing compns.)

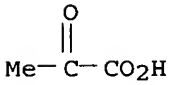
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

(antifungal wound healing compns.)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



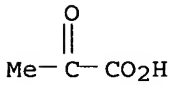
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



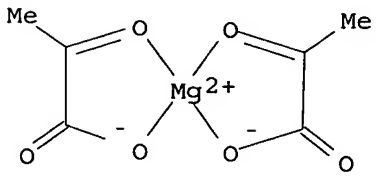
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

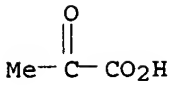


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 72 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:580666 HCAPLUS
DOCUMENT NUMBER: 127:181148
TITLE: Liquid compositions for adrenal cortex function promotion and infection prevention
INVENTOR(S): Sakata, Shigenobu; Tatsumi, Jiro; Fukai, Masaru
PATENT ASSIGNEE(S): Handa, Shigenobu, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09176029	A2	19970708	JP 1995-354770	19951226
PRIORITY APPLN. INFO.:			JP 1995-354770	19951226

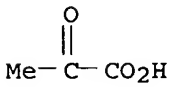
AB Liquid compns. for adrenal cortex function promotion and infection prevention comprise Tilia exts. and substances selected from e.g. iron ammonium citrate, salicylic acid and citric acid. The compns. also can be incorporated into cosmetics or foods.

IC ICM A61K035-78
ICS A61K031-70; A61K031-715; A61K038-43
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 17, 62
IT 50-70-4, D-Glucitol, biological studies 50-81-7, Ascorbic acid, biological studies 50-99-7, D-Glucose, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 56-81-5, 1,2,3-Propanetriol, biological studies 56-84-8, Aspartic acid, biological studies 56-85-9, Glutamine, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, Cystine, biological studies 59-43-8, Thiamine, biological studies 60-18-4, Tyrosine, biological studies 61-90-5, L-Leucine, biological studies 63-68-3, Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 64-17-5, Ethanol, biological studies 69-72-7, Salicylic acid, biological studies 71-00-1, Histidine, biological studies 72-18-4, Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, Tryptophan, biological studies 73-32-5, IsoLeucine, biological studies 74-79-3, Arginine, biological studies 77-92-9, biological studies 83-88-5, Riboflavin, biological studies 97-59-6, Allantoin 99-76-3, Methylparaben **113-24-6**, Sodium pyruvate 119-36-8, Methyl salicylate 127-17-3, Pyruvic acid, biological studies 157-07-3 498-24-8, Citronic acid 499-44-5, 4-Isopropyl tropolone 994-36-5, Citric acid sodium salt 1114-41-6, Muramic acid 1398-61-4, Chitin 1406-18-4, Vitamin E 2338-05-8, Citric acid iron salt 2466-09-3, Pyrophosphoric acid 7050-19-3, Iron ammonium citrate 7439-89-6, Iron, biological studies 7440-09-7, Potassium, biological studies 7440-70-2, Calcium, biological studies

7601-54-9, Sodium phosphate 7681-53-0, Sodium hypophosphite 7693-13-2, Citric acid calcium salt 7722-88-5 7723-14-0, Phosphorus, biological studies 7732-18-5, Water, biological studies 7758-87-4, TriCalcium phosphate 7778-53-2, Tripotassium phosphate 7778-77-0, Potassium dihydrogen phosphate 9000-69-5, Pectins 9004-34-6, Cellulose, biological studies 9004-53-9, Dextrin 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-49-6, Heparin, biological studies 9007-27-6, Chondroitin 9012-72-0D, Glucan, derivative 9014-63-5, Xylan 9046-40-6, Pectic acid 9057-02-7, Pullulan 10103-46-5, Calcium phosphate 10124-31-9, Ammonium phosphate 11103-57-4, Vitamin A 11138-66-2, Xanthan gum 12001-76-2, Vitamin B 12619-70-4, Cyclodextrin 26009-03-0, Polyglycolic acid 26124-68-5, Polyglycolic acid 50813-16-6, Sodium metaphosphate
RL: BUU (Biological use, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(liquid compns. for adrenal cortex function promotion and infection prevention)

IT **113-24-6**, Sodium pyruvate
RL: BUU (Biological use, unclassified); **FFD (Food or feed use)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(liquid compns. for adrenal cortex function promotion and infection prevention)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



Na

L102 ANSWER 73 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:574521 HCAPLUS
DOCUMENT NUMBER: 127:225310
TITLE: Immunostimulating wound healing compositions and method for preparing and using same
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner Lambert Co., USA
SOURCE: U.S., 49 pp., Cont.-in-part of U.S. Ser. No. 53,922, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5658957	A	19970819	US 1995-446986	19950522
JP 2002356421	A2	20021213	JP 2002-82387	19920115
JP 2003231632	A2	20030819	JP 2002-362245	19920115
CA 2218539	AA	19961128	CA 1996-2218539	19960426
WO 9637230	A1	19961128	WO 1996-US5901	19960426

W: AU, CA, JP, MX, NZ, SG
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9656311	A1	19961211	AU 1996-56311	19960426
AU 713829	B2	19991209		
EP 828514	A1	19980318	EP 1996-913231	19960426
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI				
NZ 307055	A	20000128	NZ 1996-307055	19960426
ZA 9604054	A	19971024	ZA 1996-4054	19960521
US 5981606	A	19991109	US 1998-19316	19980205
PRIORITY APPLN. INFO.:			US 1991-663500	B1 19910301
			US 1993-53922	B2 19930426
			JP 1992-505329	A3 19920115
			US 1994-224936	B1 19940408
			US 1995-446986	A 19950522
			WO 1996-US5901	W 19960426
			US 1997-37730P	P 19970202

AB This invention pertains to therapeutic immunostimulating-wound healing compns. The compns. comprise a therapeutically effective amount of an immunostimulating agent and a wound healing composition In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic immunostimulating-wound healing compns. may be utilized in a wide variety of pharmaceutical products. This invention also relates to methods for preparing and using the therapeutic immunostimulating-wound healing compns. and the pharmaceutical products in which the compns. may be used.

IC ICM A61K031-045
ICS A61K031-34; A61K031-195; A61K009-50

INCL 514724000

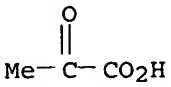
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 15

IT Anesthetics
Anti-inflammatory agents
Antibacterial agents
Antioxidants
Antiviral agents
Fungicides
Immunostimulants
Sunscreens
Wound healing promoters
(immunostimulant wound healing composition)

IT 50-81-7, Vitamin C, biological studies 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 58-95-7, VITAMin E acetate 60-33-3, Linoleic acid, biological studies 112-80-1, Oleic acid, biological studies **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 143-07-7, Lauric acid, biological studies 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 463-40-1, Linolenic acid 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Myristic acid, biological studies 544-64-9, Myristoleic acid 600-22-6, Methyl pyruvate 1002-84-2, Pentadecanoic acid 1406-18-4, Vitamin E 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate 11103-57-4, Vitamin A **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate 29204-02-2, Gadoleic acid **52009-14-0**, Calcium pyruvate 145482-34-4, Manganese pyruvate 152521-52-3, Betafectin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(immunostimulant wound healing composition)

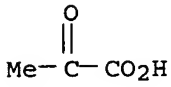
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(immunostimulant wound healing composition)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



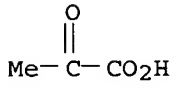
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



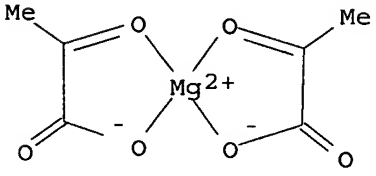
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)

●1/2 Ca

L102 ANSWER 74 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:574520 HCAPLUS
DOCUMENT NUMBER: 127:225309
TITLE: Bioadhesive-wound healing compositions and methods for preparing and using same
INVENTOR(S): Martin, Alain; Leung, Sau-hung S.
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: U.S., 131 pp., Cont.-in-part of U.S. Ser. No. 298,521, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5658956	A	19970819	US 1995-445824	19950522
JP 2002356421	A2	20021213	JP 2002-82387	19920115
JP 2003231632	A2	20030819	JP 2002-362245	19920115
CA 2194876	AA	19960307	CA 1995-2194876	19950707
WO 9606640	A1	19960307	WO 1995-US8568	19950707
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9530045	A1	19960322	AU 1995-30045	19950707
AU 707353	B2	19990708		
EP 779820	A1	19970625	EP 1995-926209	19950707
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI				
JP 10505057	T2	19980519	JP 1996-508729	19950707
NZ 290031	A	20010223	NZ 1995-290031	19950707
ZA 9507245	A	19970630	ZA 1995-7245	19950829
US 5981606	A	19991109	US 1998-19316	19980205

PRIORITY APPLN. INFO.:

US 1991-663500	B1	19910301
US 1993-53922	B2	19930426
US 1994-298521	B2	19940830
JP 1992-505329	A3	19920115
US 1994-224936	B1	19940408
US 1995-445824	A	19950522
WO 1995-US8568	W	19950707
US 1997-37730P	P	19970202

AB The present invention pertains to therapeutic bioadhesive-wound healing compns. useful for treating wounds and increasing the proliferation and resuscitation rate of mammalian cells. The compns. comprise a bioadhesive agent and a therapeutically effective amount of a wound healing composition In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic bioadhesive-wound healing compns. may further comprise medicaments such as antiviral agents, antikeratolytic agents, anti-inflammatory agents, antifungal agents, antibacterial agents,

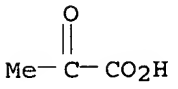
immunostimulating agents, and the like. The bioadhesive-wound healing compns. may be utilized in a wide variety of pharmaceutical products. This invention also relates to methods for preparing and using the bioadhesive-wound healing compns. and the pharmaceutical products in which the compns. may be used.

IC ICM A61K031-045
ICS A61K031-07; A61K031-355; A61L015-00
INCL 514724000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
IT Anti-inflammatory agents
Antibacterial agents
Antihistamines
Antioxidants
Antiviral agents
Fungicides
Sunscreens
Wound healing promoters
(bioadhesive wound healing compns.)
IT 50-02-2, Dexamethasone 50-21-5, biological studies 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-78-2, Acetylsalicylic acid 50-81-7, Vitamin C, biological studies 53-03-2, Prednisone 53-06-5, Cortisone 53-86-1, Indomethacin 56-75-7, Chloramphenicol 57-10-3, Hexadecanoic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 57-13-6, Urea, biological studies 57-62-5, Chlortetracycline 57-92-1, Streptomycin, biological studies 58-95-7, Vitamin E acetate 59-87-0, Nitrofurazone 60-33-3, 9,12-Octadecadienoic acid (Z,Z)-, biological studies 60-54-8, Tetracycline 61-33-6, Penicillin G, biological studies 61-68-7, Mefenamic acid 65-85-0, Benzoic acid, biological studies 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 69-53-4, Ampicillin 69-72-7, Salicylic acid, biological studies 76-25-5, Triamcinolone acetonide 79-10-7D, 2-Propenoic acid, polymers, biological studies 79-57-2, Oxytetracycline 83-43-2, Methyl prednisolone 87-08-1, Penicillin V 89-57-6, Mesalamine 99-26-3, Bismuth subgallate 108-95-2, Phenol, biological studies 110-44-1, Sorbic acid 112-80-1, Oleic acid, biological studies **113-24-6**, Sodium pyruvate 114-07-8, Erythromycin 118-60-5, 2-Ethylhexyl salicylate 124-94-7, Triamcinolone 127-17-3, Pyruvic acid, biological studies 131-57-7, Oxybenzone 134-09-8, Menthyl anthranilate 143-07-7, Lauric acid, biological studies 147-24-0, Diphenhydramine hydrochloride 153-61-7, Cephalothin 302-79-4, Tretinoin 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 443-48-1, Metronidazole 463-40-1 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Myristic acid, biological studies 544-64-9, Myristoleic acid 552-94-3, Salsalate 564-25-0, Doxycycline 600-22-6, Methyl pyruvate 637-58-1, Pramoxine hydrochloride 665-66-7, Amantadine hydrochloride 1002-84-2, Pentadecanoic acid 1344-85-0, Bismuth aluminate 1403-66-3, Gentamicin 1404-04-2, Neomycin 1405-87-4, Bacitracin 1406-05-9, Penicillin 1406-11-7, Polymyxin 1406-18-4, Vitamin E 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate 3385-03-3, Flunisolide **4151-33-1**, Potassium pyruvate 5466-77-3, 2-Ethylhexyl p-methoxycinnamate 5534-09-8, Beclomethasone dipropionate 5536-17-4, Vidarabine 5593-20-4, Betamethasone dipropionate 6197-30-4, Octocrylene 6385-02-0, Meclofenamate sodium 6506-37-2, Nimorazole 6969-49-9, Octyl salicylate 6998-60-3, Rifamycin 7440-69-9D, Bismuth, compds., biological studies 8063-07-8, Kanamycin 9000-30-0, Guar gum 9003-97-8, Polycarbophil 9004-32-4 9004-67-5, Methyl cellulose 11103-57-4, Vitamin A 11111-12-9, Cephalosporin 13463-67-7, Titanium oxide (TiO2), biological studies 14882-18-9, Bismuth subsalicylate 15307-86-5, Diclofenac 15686-71-2, Cephalexin

15687-27-1, Ibuprofen 18323-44-9, Clindamycin **18983-79-4**, Magnesium pyruvate 19387-91-8, Tinidazole 21245-02-3, Padimate O 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 22916-47-8, Miconazole 23593-75-1, Clotrimazole 24887-16-9, Zinc pyruvate 25655-41-8, Povidone-iodine 26787-78-0, Amoxicillin 29204-02-2, Gadoleic acid 30516-87-1, Zidovudine 34597-40-5, Fenoprofen calcium 36322-90-4, Piroxicam 36791-04-5, Ribavirin 38194-50-2, Sulindac 41340-25-4, Etodolac 42924-53-8, Nabumetone **52009-14-0**, Calcium pyruvate 57644-54-9, Bismuth subcitrate 58817-05-3, Octyl p-dimethylaminobenzoate 59277-89-3, Acyclovir 63585-09-1, Foscarnet sodium 64425-90-7, Choline magnesium trisalicylate, biological studies 64872-76-0, Butoconazole 65899-73-2, Tioconazole 67915-31-5, Terconazole 74103-07-4, Ketorolac tromethamine 96436-87-2, 2-Propenoic acid, 3-(4-methoxyphenyl)-, octyl ester 107910-75-8, Ganciclovir sodium 145482-34-4, Manganese pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(bioadhesive wound healing compns.)

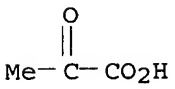
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(bioadhesive wound healing compns.)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



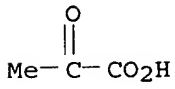
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



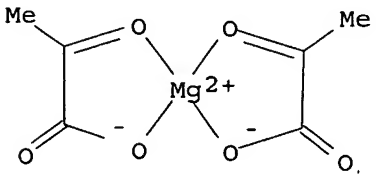
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

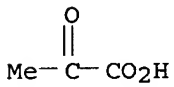


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 75 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:513486 HCAPLUS
DOCUMENT NUMBER: 127:166804
TITLE: Therapeutic-wound healing compositions and methods for preparing and using same
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 172 pp., Cont.-in-part of U.S. Ser. No. 187,435, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5652274	A	19970729	US 1995-445813	19950522
JP 2002356421	A2	20021213	JP 2002-82387	19920115
JP 2003231632	A2	20030819	JP 2002-362245	19920115
US 5981606	A	19991109	US 1998-19316	19980205
PRIORITY APPLN. INFO.:			US 1991-663500 B2	19910301
			US 1991-798392 B1	19911126
			US 1994-187435 B2	19940127
			JP 1992-505329 A3	19920115
			US 1993-53922 B2	19930426
			US 1994-224936 B1	19940408
			US 1997-37730P P	19970202

AB This invention pertains to therapeutic wound healing compns. for protecting and resuscitating mammalian cells. In one embodiment, the therapeutic wound healing composition comprises (a) pyruvate, (b) an antioxidant, and (c) a mixture of saturated and unsatd. fatty acids. In another

embodiment, the therapeutic wound healing composition comprises (a) pyruvate, (b) lactate, and (c) a mixture of saturated and unsatd. fatty acids. In yet another embodiment, the therapeutic wound healing composition comprises (a) an antioxidant and (b) a mixture of saturated and unsatd. fatty adds. In still yet another embodiment, the therapeutic wound healing composition comprises (a) lactate, (b) an antioxidant, and (c) a mixture of saturated and unsatd. fatty acids. This invention also pertains to wound healing compns. combined with a medicament which is useful for treating injured mammalian cells to form augmented wound healing compns. such as immunostimulating-wound healing compns., antiviral-wound healing compns., antikeratolytic-wound healing compns., anti-inflammatory-wound healing compns., antifungal-wound healing compns., acne treating-wound healing compns., sunscreen-wound healing compns., dermatol.-wound healing compns., antihistamine-wound healing compns., antibacterial-wound healing compns., and bioadhesive-wound healing compns. This invention also pertains to wound healing compns. combined with a cytotoxic agent to form cytoprotective-wound healing compns. useful for protecting and reducing injury to mammalian cells and to razor cartridges comprising the wound healing compns. This invention also pertains to methods for preparing and using the wound healing compns. and the topical and ingestible pharmaceutical products in which the therapeutic compns. may be used.

IC ICM A61K031-45
ICS A61K031-07; A61K031-34; A61K047-00

INCL 514724000

CC 63-6 (Pharmaceuticals)

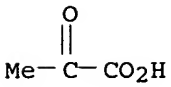
IT Anesthetics
Anti-inflammatory agents
Antibacterial agents
Antihistamines
Antioxidants
Antiviral agents
Fungicides
Immunostimulants
Sunscreens
Wound healing promoters
(therapeutic wound healing compns.)

IT 50-81-7, Vitamin C, biological studies **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 328-50-7, α-Ketoglutaric acid 600-22-6, Methyl pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate **52009-14-0**, Calcium pyruvate 145482-34-4, Manganese pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic wound healing compns.)

IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic wound healing compns.)

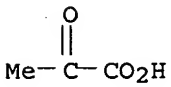
RN 113-24-6 HCAPLUS

CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



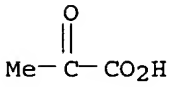
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



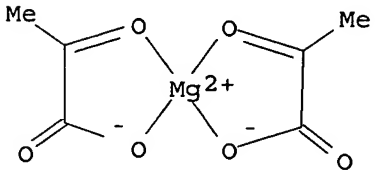
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

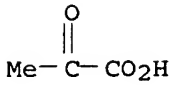


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 76 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:454000 HCAPLUS
DOCUMENT NUMBER: 127:62876
TITLE: Immortalized human skin cell lines and serum-free medium for their culture
INVENTOR(S): Baur, Markus; Mace, Catherine; Malnoe, Armand; Pfeifer, Andrea M. A.; Regnier, Marcelle
PATENT ASSIGNEE(S): Societe Des Produits Nestle S.A., Switz.
SOURCE: Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 780469	A1	19970625	EP 1996-203641	19961219
EP 780469	B1	20010228		
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
CA 2234118	AA	19970703	CA 1996-2234118	19961219
WO 9723602	A1	19970703	WO 1996-EP5812	19961219
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9713054	A1	19970717	AU 1997-13054	19961219
AU 730222	B2	20010301		
EP 877797	A1	19981118	EP 1996-944641	19961219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CN 1205737	A	19990120	CN 1996-199175	19961219
BR 9612256	A	19990713	BR 1996-12256	19961219
JP 2000506374	T2	20000530	JP 1997-523329	19961219
AT 199390	E	20010315	AT 1996-203641	19961219
ES 2155166	T3	20010501	ES 1996-203641	19961219
PT 780469	T	20010629	PT 1996-203641	19961219
SK 283314	B6	20030502	SK 1998-835	19961219
RU 2215030	C2	20031027	RU 1998-113400	19961219
IL 124191	A1	20040601	IL 1996-124191	19961219
NO 9802810	A	19980821	NO 1998-2810	19980618
US 2002012993	A1	20020131	US 1998-91483	19980619
US 6423540	B2	20020723		
GR 3035719	T3	20010731	GR 2001-400570	20010406
US 2002042129	A1	20020411	US 2001-982649	20011018
US 6949381	B2	20050927		

PRIORITY APPLN. INFO.: US 1995-576483 A 19951221
WO 1996-EP5812 W 19961219
US 1998-91483 A1 19980619

AB The invention concerns immortalized cell lines, especially of keratinocytes and melanocytes derived from normal human skin, as well as a novel serum-free medium for the isolation, growth, and maintenance of these cells. Procedures and compns. are disclosed for producing primary melanocytes and keratinocytes in the absence of serum and without fibroblast nurse cells. Plasmids derived from SV40 virus or papilloma virus 16 were used to immortalize the melanocytes and keratinocytes of this invention. The findings are useful for the improved immunol., pharmacol., photo-, and chemotoxicol. anal. of cutaneous reactions and for the expression of heterologous genes. The cells may be used for studying the inflammation reaction and for skin grafting.

IC ICM C12N005-08
ICS C12N005-00; C12N005-22

CC 9-11 (Biochemical Methods)
Section cross-reference(s): 13, 14

IT Transformation, **neoplastic**
(immortalization; immortalized human skin cell lines culture in serum-free medium)

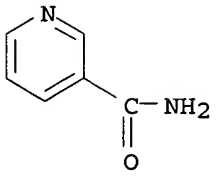
IT **Tumor** necrosis factors
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence)
(immortalized human skin cell lines culture in serum-free medium)

IT 50-23-7, Hydrocortisone 50-89-5, Thymidine, biological studies 50-99-7, D-Glucose, biological studies 51-43-4, Epinephrine 52-90-4, L-Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 57-92-1, Streptomycin, biological studies 58-85-5 59-30-3, Folic acid, biological studies 59-43-8, Thiamin, biological studies 60-18-4, L-Tyrosine, biological studies 61-33-6, biological studies 61-90-5, L-Leucine, biological studies 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 65-23-6, Pyridoxine 67-48-1, Choline chloride 68-19-9, Cyanocobalamin 70-47-3, L-Asparagine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 73-24-5, Adenine, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies 83-88-5, Riboflavin, biological studies 87-89-8, i-Inositol **98-92-0**, **Nicotinamide** 110-60-1, Putrescine **113-24-6**, Sodium pyruvate 127-09-3, Sodium acetate 137-08-6, Calcium pantothenate 141-43-5, biological studies 143-74-8, Phenol red 144-55-8, Carbonic acid monosodium salt, biological studies 147-85-3, L-Proline, biological studies 1071-23-4, Phosphoethanolamine 1077-28-7, Thioctic acid 1397-89-3, **Fungizone** 6834-92-0 7365-45-9, HEPES 7440-70-2, Calcium, biological studies 7447-40-7, Potassium chloride, biological studies 7558-79-4, Disodium phosphate 7647-14-5, Sodium chloride (NaCl), biological studies 7733-02-0, Zinc sulfate 7758-98-7, Cupric sulfate, biological studies 7772-99-8, Tin chloride, biological studies 7773-01-5, Manganese chloride 7786-30-3, Magnesium chloride, biological studies 7786-81-4, Nickel sulfate 7803-55-6, Ammonium metavanadate 9004-10-8, Insulin, biological studies 10028-22-5, Ferric sulfate 10043-52-4, Calcium chloride (CaCl2), biological studies 10102-18-8, Sodium selenite 12027-67-7, Ammonium molybdate 16561-29-8, Phorbol 12-myristate 13-acetate 62229-50-9,

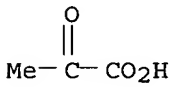
Epidermal growth factor 106096-93-9, Basic fibroblast growth factor
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(immortalized human skin cell lines culture in serum-free medium)

IT **98-92-0, Nicotinamide 113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(immortalized human skin cell lines culture in serum-free medium)

RN 98-92-0 HCAPLUS
CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

L102 ANSWER 77 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:425981 HCAPLUS
DOCUMENT NUMBER: 127:126651
TITLE: Antikeratolytic-wound healing compositions and methods for preparing and using same
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: U.S., 41 pp., Cont.-in-part of U.S. Ser. No. 268,772, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5641814	A	19970624	US 1995-445808	19950522
JP 2002356421	A2	20021213	JP 2002-82387	19920115
JP 2003231632	A2	20030819	JP 2002-362245	19920115
CA 2191605	AA	19960111	CA 1995-2191605	19950622
WO 9600572	A1	19960111	WO 1995-US7941	19950622
W: AU, CA, JP, MX, NZ, SG				

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9528707	A1	19960125	AU 1995-28707	19950622
AU 701301	B2	19990121		
EP 768877	A1	19970423	EP 1995-924046	19950622
R: BE, CH, DE, DK, ES, FR, GB, GR, IT				
JP 10502344	T2	19980303	JP 1995-503322	19950622
NZ 288995	A	20010223	NZ 1995-288995	19950622
ZA 9505409	A	19970401	ZA 1995-5409	19950629
US 5981606	A	19991109	US 1998-19316	19980205
PRIORITY APPLN. INFO.:			US 1991-663500	B2 19910301
			US 1993-53922	B1 19930426
			US 1994-268772	B2 19940630
			JP 1992-505329	A3 19920115
			US 1994-224936	B1 19940408
			US 1995-445808	A 19950522
			WO 1995-US7941	W 19950622
			US 1997-37730P	P 19970202

AB This invention pertains to therapeutic antikeratolytic-wound healing compns. The compns. comprise a therapeutically effective amount of an antikeratolytic agent and a wound healing composition In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic antikeratolytic-wound healing compns. may be utilized in a wide variety of topical and ingestible pharmaceutical products. This invention also relates to methods for preparing and using the therapeutic antikeratolytic-wound healing compns. and the pharmaceutical products in which the compns. may be used. The antikeratolytic agent is selected from the group consisting of salicylic acid, lactic acid, and urea. A wound-healing composition containing Na pyruvate 2, vitamin E 1, chicken fat 2 %, live yeast cell derivative 2400 U, shark liver oil 3, petrolatum 64, mineral oil 22.53, paraffins 5, and emulsifier 0.2 % was combined with an antikeratolytic agent to prevent scaling and dryness of the injured cells.

IC ICM A61K031-045
ICS A61K031-07; A61K031-355

INCL 514724000

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

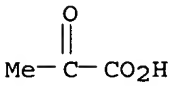
IT Anesthetics
Anti-inflammatory agents
Antibacterial agents
Antihistamines
Antioxidants
Antiviral agents
Culture media
Fungicides
Immunostimulants
Psoriasis
Sunscreens
Wound healing promoters
(topical compns. containing keratolysis inhibitors and wound healing agents)

IT 50-21-5, Lactic acid, biological studies 50-81-7, Vitamin C, biological studies 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 57-13-6, Urea., biological studies 58-95-7, Vitamin E acetate. 60-33-3, Linoleic acid, biological studies 69-72-7, Salicylic acid, biological studies 112-80-1, Oleic acid, biological studies **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 143-07-7, Lauric acid, biological studies 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 463-40-1,

Linolenic acid 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Myristic acid,, biological studies 544-64-9, Myristoleic acid 600-22-6, Methyl pyruvate 1002-84-2, Pentadecanoic acid 1406-18-4, Vitamin E; 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate 11103-57-4, Vitamin A **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc pyruvate 29204-02-2, Gadoleic acid **52009-14-0**, Calcium pyruvate 145482-34-4, Manganese pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(topical compns. containing keratolysis inhibitors and wound healing agents)

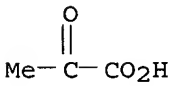
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(topical compns. containing keratolysis inhibitors and wound healing agents)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



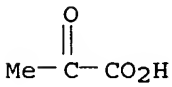
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



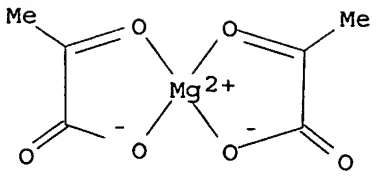
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

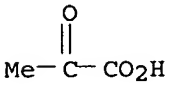


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 78 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:390697 HCAPLUS
DOCUMENT NUMBER: 127:2744
TITLE: Method for ex vivo proliferation and differentiation of adult pancreatic islet cells, media useful therefor and uses thereof
INVENTOR(S): Soon-Shiong, Patrick; Varsanyi-Nagy, Maria; Ferreri, Kevin; Moloney, Molly; Heintz, Roswitha
PATENT ASSIGNEE(S): Vivorx, Inc., USA
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9716536	A1	19970509	WO 1996-US16396		19961011
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG					
AU 9674439	A1	19970522	AU 1996-74439		19961011
PRIORITY APPLN. INFO.:			US 1995-558591	A	19951030
			WO 1996-US16396	W	19961011

AB A method for inducing the proliferation and differentiation of neonatal and/or adult human or non-human pancreatic islets to produce a product useful, for example, as a therapeutic agent for treatment of diabetes was developed. The method involves a series of complex cell culture media containing necessary nutrients and growth factors, a human cytokine (hepatocyte growth factor or scatter factor), a microgravity culture vessel for promoting 3-dimensional growth, and mol. biol. assays for measuring insulin promoter activity. A method for providing a hybrid

organoid comprising a combination of donor and recipient cell types is also described.

IC ICM C12N005-08
ICS A61K035-39

CC 9-11 (Biochemical Methods)
Section cross-reference(s): 2, 14

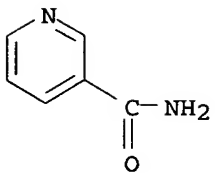
ST pancreatic islet cell culture proliferation differentiation; microgravity culture vessel pancreatic islet proliferation; type 1 **diabetes** therapy cell culture

IT **Diabetes** mellitus
(insulin-dependent; ex vivo proliferation and differentiation of adult pancreatic islet cells and media and uses)

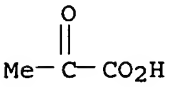
IT 50-23-7, Hydrocortisone 50-81-7, Ascorbic acid, biological studies 50-89-5, Thymidine, biological studies 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, L-Cystine, biological studies 58-85-5, Biotin 59-30-3, Folic acid, biological studies 59-43-8, Thiamine, biological studies 60-18-4, L-Tyrosine, biological studies 60-33-3, 9,12-Octadecadienoic acid (Z,Z)-, biological studies 61-90-5, L-Leucine, biological studies 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 65-23-6, Pyridoxine 67-48-1, Choline chloride 68-19-9, Vitamin B12 68-94-0, Hypoxanthine 70-47-3, L-Asparagine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies 83-88-5, Riboflavin, biological studies 87-89-8, Myoinositol **98-92-0**, **Nicotinamide** 110-60-1, Putrescine **113-24-6**, Sodium pyruvate 137-08-6, Calcium pantothenate 143-74-8, Phenol red 147-85-3, L-Proline, biological studies 7447-40-7, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies 7558-79-4, Disodium phosphate 7647-14-5, Sodium chloride (NaCl), biological studies 7720-78-7, Ferrous sulfate 7733-02-0, Zinc sulfate 7758-98-7, Cupric sulfate, biological studies 7778-77-0, Monobasic potassium phosphate 7783-00-8, Selenious acid 9035-54-5, Placental lactogen 10043-52-4, Calcium chloride (CaCl2), biological studies 57828-26-9, Lipoic acid 116243-73-3, Endothelin
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ex vivo proliferation and differentiation of adult pancreatic islet cells and media and uses)

IT **98-92-0**, **Nicotinamide** **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ex vivo proliferation and differentiation of adult pancreatic islet cells and media and uses)

RN 98-92-0 HCAPLUS
CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



L102 ANSWER 79 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:308048 HCAPLUS
DOCUMENT NUMBER: 126:272355
TITLE: Method and composition using antioxidant inflammatory response mediator for treating mammalian diseases caused by inflammatory response
INVENTOR(S): Katz, Stanley E.
PATENT ASSIGNEE(S): Cellular Sciences, Inc., USA; Katz, Stanley E.
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9710818	A1	19970327	WO 1996-US14304	19960906
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
CA 2205112	AA	19970327	CA 1996-2205112	19960906
AU 9669159	A1	19970409	AU 1996-69159	19960906
AU 719332	B2	20000504		
EP 804181	A1	19971105	EP 1996-929932	19960906
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 10509463	T2	19980914	JP 1996-512741	19960906
NZ 306832	A	20010427	NZ 1996-306832	19960906
IL 119225	A1	20000928	IL 1996-119225	19960909
ZA 9607833	A	19970602	ZA 1996-7833	19960917
TW 434012	B	20010516	TW 1996-85111379	19960918

PRIORITY APPLN. INFO.: US 1995-3962P P 19950919

WO 1996-US14304 W 19960906

AB A method for treating the disease state in mammals caused by mammalian cells involved in the inflammatory response is disclosed. Mammalian cells participating in the inflammatory response are contacted with an inflammatory response mediator which reduces the undesired inflammatory response and is an antioxidant. The inflammatory response mediator may further provide a cellular energy source and be a building block in the cellular synthesis of other cellular components. Compns. for reducing and treating undesired inflammatory response are also disclosed. The inflammatory response mediator may be e.g. lactate or pyruvate or precursors or salts thereof. The efficacy of treatment with sodium pyruvate in a patient with emphysema and restrictive airway disease is presented.

IC ICM A61K031-19
ICS A61K031-195; A61K031-12; A61K031-045

CC 1-7 (Pharmacology)
Section cross-reference(s): 63

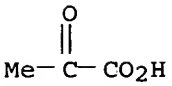
IT Antibacterial agents
Antihistamines
Antiviral agents
Fungicides
Therapy
(antioxidant inflammatory response mediator and therapeutic agent for treating diseases caused by inflammatory response)

IT Anti-inflammatory agents
Antiasthmatics
Antioxidants
Cystic fibrosis
Drug delivery systems
Emphysema
Energy metabolism, animal
Erythema
Leukocyte
Pneumonia
(antioxidant inflammatory response mediator for treating diseases caused by inflammatory response)

IT 50-21-5, biological studies 50-21-5D, salts 57-55-6, 1,2-Propanediol, biological studies 96-26-4, Dihydroxyacetone **113-24-6**, Sodium pyruvate 127-17-3, biological studies 127-17-3D, salts 631-66-3, Pyruvamide 2043-43-8, Lactamide 2392-63-4 **2922-61-4**, Lithium pyruvate 3997-91-9 **4151-33-1**, Potassium pyruvate 7712-27-8 16947-06-1 **18983-79-4**, Magnesium pyruvate 24887-16-9 **52009-14-0**, Calcium pyruvate 68164-07-8 68259-69-8 70190-98-6 70190-99-7 90088-56-5 112757-17-2 112757-18-3 145482-34-4 152102-61-9
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antioxidant inflammatory response mediator for treating diseases caused by inflammatory response)

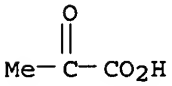
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antioxidant inflammatory response mediator for treating diseases caused by inflammatory response)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



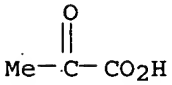
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



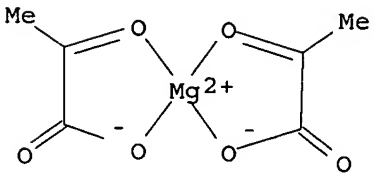
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

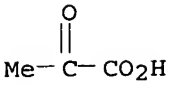


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

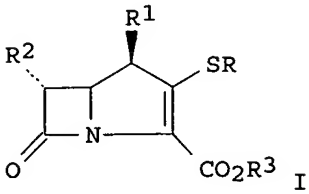
L102 ANSWER 80 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:128094 HCAPLUS
DOCUMENT NUMBER: 126:225148
TITLE: 2-thiosubstituted carbapenems
INVENTOR(S): Lin, Yang-i; Bitha, Panayota; Sakya, Subas; Strohmeyer, Timothy W.; Bush, Karen; Ziegler, Carl B.; Feigelson, Gregg B.
PATENT ASSIGNEE(S): American Cyanamid Company, USA
SOURCE: U.S., 95 pp., Cont.-in-part of U.S. Ser. No. 33,684, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5602118	A	19970211	US 1994-182781	19940126
SG 77541	A1	20010116	SG 1996-3099	19940217
SG 91908	A1	20021015	SG 2001-200101813	19940217
HU 67741	A2	19950428	HU 1994-724	19940311
HU 70209	A2	19950928	HU 1995-213	19940311
CA 2118961	AA	19940917	CA 1994-2118961	19940314
FI 9401215	A	19940917	FI 1994-1215	19940315
FI 106718	B1	20010330		
NO 9400928	A	19940919	NO 1994-928	19940315
NO 311939	B1	20020218		
AU 9457831	A1	19940922	AU 1994-57831	19940315
AU 676877	B2	19970327		
ZA 9401828	A	19941018	ZA 1994-1828	19940315
JP 06321948	A2	19941122	JP 1994-69945	19940315
RU 2130457	C1	19990520	RU 1994-8616	19940315
PL 179558	B1	20000929	PL 1994-302626	19940315
CZ 290494	B6	20020814	CZ 1994-586	19940315
CN 1104214	A	19950628	CN 1994-102266	19940316
CN 1041633	B	19990113		
CN 1482122	A	20040317	CN 2003-2003145716	19940316
TW 474937	B	20020201	TW 1994-83102728	19940328
US 5750735	A	19980512	US 1995-445388	19950519
US 5623081	A	19970422	US 1995-448052	19950523
US 5744465	A	19980428	US 1995-448295	19950523
AU 9728338	A1	19970911	AU 1997-28338	19970627
AU 716772	B2	20000309		
CN 1223261	A	19990721	CN 1998-114768	19980610
CN 1136207	B	20040128		

PRIORITY APPLN. INFO.:

US 1993-33684	B2	19930316
US 1994-182781	A3	19940126
HU 1994-724	A	19940311

OTHER SOURCE(S): MARPAT 126:225148
GI



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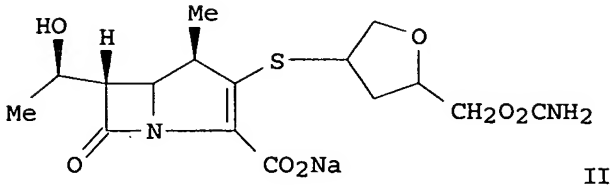

II

AB Carbapenems I [R = substituted 3- tetrahydrofuryl; R1 = alkyl, alkenyl, cycloalkyl, substituted alkyl; R2 = H,, Me, Et, substituted Me; R3 = H, alkyl, alkoxymethyl, acyloxymethyl, acyloxyethyl, alkoxycarbonyloxymethyl, alkoxycarbonyloxyethyl] were prepared for use as bactericides. Thus, the carbapenem II was prepared from the phosphate and the cis-2-carbamoyloxymethyltetrahydrofuran-4-thiol. II showed min. inhibitory concns. of 0.06 μg/mL against several strains of E. coli, but had little activity against Pseudomonas aeruginosa.

IC ICM A61K031-395
ICS A01N043-00; C07D487-04

INCL 514210000

CC 26-5 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 10

ST tetrahydrofurylthiocarbapenem prepn **bactericide**; carbapenem tetrahydrofurylthio prepn **bactericide**

IT Antibacterial agents
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT 161855-50-1P 161855-67-0P 161855-74-9P 188067-97-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT 161854-58-6P 161855-13-6P 161855-51-2P 161855-68-1P 161855-70-5P
161855-73-8P 161855-75-0P 161856-64-0P 161969-00-2P 188067-73-4P
188067-79-0P 188067-87-0P 188067-91-6P 188067-95-0P 188067-98-3P
188067-99-4P 188068-00-0P 188068-02-2P 188068-03-3P 188068-04-4P
188068-09-9P 188068-14-6P 188068-26-0P 188068-68-0P 188068-89-5P
188069-02-5P 188069-03-6P 188069-23-0P 188193-02-4P 188193-03-5P
188193-05-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT 56-40-6, Glycine, reactions 56-41-7, L-Alanine, reactions 61-90-5, L-Leucine, reactions 63-91-2, L-Phenylalanine, reactions 72-18-4, L-Valine, reactions 73-32-5, L-Isoleucine, reactions 108-93-0, Cyclohexanol, reactions 108-95-2, Phenol, reactions 135-19-3, 2-Naphthol, reactions 371-41-5, 4-Fluorophenol 533-67-5, 2-Deoxy-D-ribose 627-76-9, DL-2-Aminopimelic acid 1072-72-6, 4-Tetrahydrothiopyranone 1492-24-6, L-2-Aminobutyric acid 1550-35-2, 2,4-Difluorobenzaldehyde 1707-77-3 1708-29-8, 2,5-Dihydrofuran 2731-73-9, 3-Chloro-L-alanine 3019-71-4, Trichloroacetyl isocyanate 5336-08-3, D-(+)-Ribonic acid γ-lactone 5840-76-6, 3-Methyl-2,5-oxazolidinedione 6258-60-2, p-Methoxybenzyl mercaptan 6938-68-7 20031-21-4, 1,2-O-Isopropylidene-D-xylofuranose 31166-44-6,

1-Benzyloxycarbonylpiperazine 32780-06-6 34371-14-7 52499-14-6,
4-Dodecylbenzenesulfonyl chloride 64370-35-0, p-Nitrobenzyl glyoxylate
83972-01-4, Magnesium p-nitrobenzyl malonate 90776-58-2 101221-89-0,
1,2-Dideoxy-D-ribose 127657-97-0 131139-12-3 137719-23-4
188067-74-5 188069-54-7 188069-59-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT 285-69-8P, 3,6-Dioxabicyclo[3.1.0]hexane 4119-18-0P 4596-53-6P,
N-(4-Nitrobenzyloxycarbonyl)glycine 13942-76-2P 14825-82-2P
15186-48-8P 20701-43-3P 42850-68-0P, 1,4-Dioxa-8-thiaspiro[4.5]decane
51979-87-4P 53793-17-2P 58909-39-0P 58931-16-1P 60656-87-3P,
Benzyloxyacetaldehyde 61477-12-1P, 1,4-Dioxa-8-thiaspiro[4.5]decane-7-
thiol 62396-80-9P 65973-24-2P 79364-35-5P 79791-38-1P,
4-Dodecylbenzenesulfonyl azide 82064-10-6P 82165-72-8P 83159-91-5P
87604-46-4P 87604-53-3P 88981-35-5P 89860-19-5P 90195-00-9P
90776-59-3P 90822-22-3P 90822-23-4P 90822-24-5P 90822-25-6P
91547-59-0P 96165-57-0P 98839-13-5P 99096-92-1P 99417-55-7P
99464-83-2P, 1-Chloroethyl cyclohexyl carbonate 99838-68-3P
101623-69-2P 116444-20-3P 134651-25-5P 137063-79-7P 144659-36-9P
144659-37-0P 157453-70-8P 158514-89-7P 158556-65-1P 161854-41-7P
161854-42-8P 161854-56-4P 161854-57-5P 161854-76-8P 161854-77-9P
161854-78-0P 161854-80-4P 161854-81-5P 161854-85-9P 161854-86-0P
161854-89-3P 161855-04-5P 161855-07-8P 161855-08-9P 161855-11-4P
161855-14-7P 161855-15-8P 161855-16-9P 161855-17-0P 161855-18-1P
161855-20-5P 161855-21-6P 161855-22-7P 161855-32-9P 161855-45-4P
161855-46-5P 161855-47-6P 161855-48-7P 161855-49-8P 161855-52-3P
161855-53-4P 161855-62-5P 161855-63-6P 161855-69-2P 161855-71-6P
161855-72-7P 161855-76-1P 161855-77-2P 161855-78-3P 161855-79-4P
161855-80-7P 161855-81-8P 161855-82-9P 161855-87-4P 161855-92-1P
161855-93-2P 161855-94-3P 161855-96-5P 161855-97-6P 161855-99-8P
161856-00-4P 161856-04-8P 161856-05-9P 161856-08-2P 161856-09-3P
161856-10-6P 161856-11-7P 161856-12-8P 161856-13-9P 161856-14-0P
161856-15-1P 161856-17-3P 161856-18-4P 161856-19-5P 161856-21-9P
161856-22-0P 161856-23-1P 161856-24-2P 161856-25-3P 161856-26-4P
161856-29-7P 161856-30-0P 161856-35-5P 161856-40-2P 161856-41-3P
161856-42-4P 161856-43-5P 161856-44-6P 161856-53-7P 161856-56-0P
161856-65-1P 161856-70-8P 161856-71-9P 161856-72-0P 161856-73-1P
161856-98-0P 161856-99-1P 161857-00-7P 161857-05-2P 161857-07-4P
161857-08-5P 161857-09-6P 161857-10-9P 161857-11-0P 161857-12-1P
161857-13-2P, 1,4-Dioxa-8-thiaspiro[4.5]decan-7-ol 161968-59-8P
161968-65-6P 161968-66-7P 161968-69-0P 161968-70-3P 161968-71-4P
161968-76-9P 161968-77-0P 161969-08-0P 161969-09-1P 161969-10-4P
161969-32-0P 161969-47-7P 161969-48-8P 161969-49-9P 161969-50-2P
161969-51-3P 161969-52-4P 161969-53-5P 188067-61-0P 188067-62-1P
188067-63-2P 188067-64-3P 188067-65-4P 188067-67-6P 188067-68-7P
188067-69-8P 188067-72-3P 188067-75-6P 188067-76-7P 188067-77-8P
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188067-90-5P 188067-92-7P 188067-93-8P 188067-94-9P 188067-96-1P
188068-05-5P 188068-06-6P 188068-07-7P 188068-08-8P 188068-10-2P
188068-11-3P 188068-12-4P 188068-13-5P 188068-15-7P 188068-16-8P
188068-17-9P 188068-18-0P 188068-19-1P 188068-23-7P 188068-28-2P
188068-30-6P 188068-35-1P 188068-37-3P 188068-57-7P 188068-75-9P
188068-77-1P 188068-79-3P 188068-81-7P 188068-83-9P 188068-85-1P
188068-87-3P 188068-88-4P 188068-90-8P 188068-91-9P 188068-92-0P
188068-93-1P 188068-94-2P 188068-95-3P 188068-96-4P 188068-97-5P
188068-98-6P 188068-99-7P 188069-00-3P 188069-01-4P 188069-04-7P
188069-05-8P 188069-06-9P 188069-07-0P 188069-08-1P 188069-09-2P
188069-12-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT 188069-13-8P 188069-14-9P 188069-15-0P 188069-16-1P 188069-17-2P
188069-18-3P 188069-19-4P 188069-20-7P 188069-22-9P 188069-24-1P
188069-25-2P 188069-26-3P 188069-27-4P 188069-28-5P 188069-30-9P
188069-31-0P 188069-34-3P 188069-35-4P 188069-36-5P 188069-37-6P
188069-39-8P 188069-43-4P 188069-44-5P 188069-46-7P 188069-47-8P
188069-48-9P 188069-50-3P 188069-51-4P 188069-52-5P 188069-55-8P
188069-56-9P 188069-60-5P 188069-61-6P 188069-63-8P 188069-64-9P
188069-66-1P 188069-67-2P 188069-68-3P 188069-70-7P 188069-72-9P
188190-90-1P 188193-04-6P 188193-06-8P 188193-07-9P 188193-08-0P
188193-09-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT 161856-27-5P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

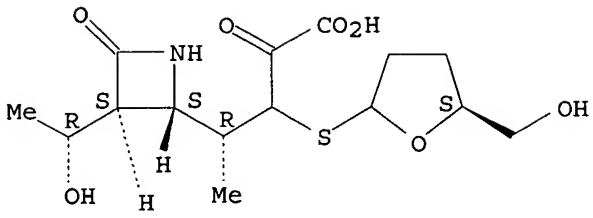
IT 2224-52-4P 3190-70-3P 87604-54-4P 91121-19-6P 101623-68-1P,
1-Acetoxyethyl p-nitrophenyl carbonate 116558-42-0P 144446-03-7P,
1-Bromoethyl cyclohexyl carbonate 161855-89-6P 161855-98-7P
161856-02-6P 161856-03-7P 161856-94-6P 161857-06-3P 188067-66-5P
188069-11-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT 161854-79-1P 161854-82-6P 161855-19-2P 161855-25-0P 161855-90-9P
161855-95-4P 161856-01-5P 161856-16-2P 161856-20-8P 161856-28-6P
161856-74-2P 161968-91-8P 161969-11-5P 161969-14-8P 188068-21-5P
188068-32-8P 188069-10-5P 188069-21-8P 188069-29-6P 188069-32-1P
188069-33-2P 188069-40-1P 188069-45-6P **188069-49-0P**
188069-53-6P 188069-57-0P 188069-58-1P 188069-62-7P 188069-65-0P
188069-69-4P 188069-71-8P 188069-73-0P 188069-74-1P 188069-75-2P
188193-10-4P
RL: SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

IT **188069-49-0P**
RL: SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of **bactericidal** tetrahydrofurylthiocarbapenems)

RN 188069-49-0 HCAPLUS
CN 2-Azetidinebutanoic acid, 3-(1-hydroxyethyl)-γ-methyl-α,4-dioxo-β-[[tetrahydro-5-(hydroxymethyl)-2-furanyl]thio]-, monopotassium salt, [2S[β(5S),γR],3S(R)]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● K

L102 ANSWER 81 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:67456 HCAPLUS
DOCUMENT NUMBER: 126:79962
TITLE: Immunostimulating wound healing compositions and methods for preparing and using same
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Company, USA
SOURCE: PCT Int. Appl., 125 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9637230	A1	19961128	WO 1996-US5901	19960426
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5658957	A	19970819	US 1995-446986	19950522
AU 9656311	A1	19961211	AU 1996-56311	19960426
AU 713829	B2	19991209		
EP 828514	A1	19980318	EP 1996-913231	19960426
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI				
NZ 307055	A	20000128	NZ 1996-307055	19960426

PRIORITY APPLN. INFO.:

US 1995-446986	A	19950522
US 1991-663500	B1	19910301
US 1993-53922	B2	19930426
WO 1996-US5901	W	19960426

AB This invention pertains to therapeutic immunostimulating wound healing compns. The compns. comprise a therapeutically effective amount of an immunostimulating agent and a wound healing composition In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic immunostimulating wound healing compns. may be utilized in a wide variety of pharmaceutical products. This invention also relates to methods for preparing and using the therapeutic immunostimulating wound healing compns. and the pharmaceutical products in which the compns. may be used.

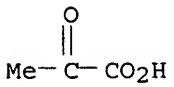
IC ICM A61K045-06
CC 63-6 (Pharmaceuticals)
IT Antihistamines
Antioxidants
Fungicides

Immunostimulants
Sunscreens
Wound healing promoters
(immunostimulating wound healing compns.)

IT **113-24-6**, Sodium pyruvate 127-17-3, biological studies 328-50-7, α-Ketoglutaric acid 600-22-6, Methyl pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate 81686-75-1 149732-45-6, Propanoic acid, 2-oxo-, zinc salt 152521-52-3, Betafectin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(immunostimulating wound healing compns.)

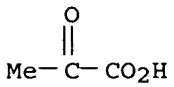
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(immunostimulating wound healing compns.)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



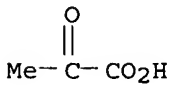
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



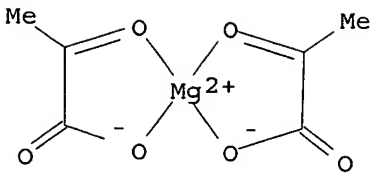
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

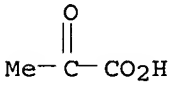


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



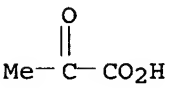
●1/2 Ca

L102 ANSWER 82 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:67453 HCAPLUS
DOCUMENT NUMBER: 126:79959
TITLE: Dermatological-wound healing compositions and methods for preparing and using same
INVENTOR(S): Martin, Alain; Nayak, Ammunje Sadananda
PATENT ASSIGNEE(S): Warner-Lambert Company, USA
SOURCE: PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9637227	A1	19961128	WO 1996-US5895	19960426
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5602183	A	19970211	US 1995-446964	19950522
AU 9656687	A1	19961211	AU 1996-56687	19960426
PRIORITY APPLN. INFO.:			US 1995-446964 A	19950522
			US 1991-663500 B1	19910301
			US 1993-53922 B2	19930426
			WO 1996-US5895 W	19960426

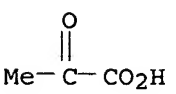
AB The present invention pertains to therapeutic dermatol.-wound healing compns. useful to minimize and treat diaper dermatitis. The compns. comprise a therapeutically effective amount of a buffering agent to maintain the pH of the dermatitis in a range from about 5 to about 8, an anti-inflammatory agent, and a wound healing composition In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic dermatol.-wound healing compns. may be utilized in a wide variety of topical pharmaceutical products. This invention also relates to methods for preparing and using the therapeutic dermatol.-wound healing compns. and the pharmaceutical products in which the compns. may be used.
IC ICM A61K045-06

CC 63-6 (Pharmaceuticals)
IT Anesthetics
Anti-inflammatory agents
Antibacterial agents
Antihistamines
Antioxidants
Buffers
Fungicides
Immunostimulants
Wound healing promoters
(dermatol. wound healing compns.)
IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-78-2, Acetylsalicylic acid 53-03-2, Prednisone 53-06-5, Cortisone 53-86-1, Indomethacin 61-68-7, Mefenamic acid 76-25-5, Triamcinolone acetonide 83-43-2, Methyl prednisolone 89-57-6, Mesalamine **113-24-6**, Sodium pyruvate 124-94-7, Triamcinolone 127-17-3, biological studies 328-50-7, α-Ketoglutaric acid 552-94-3, Salsalate 600-22-6, Methyl pyruvate **2922-61-4**, Lithium pyruvate 3385-03-3, Flunisolide **4151-33-1**, Potassium pyruvate 5534-09-8, Beclomethasone dipropionate 5593-20-4, Betamethasone dipropionate 6385-02-0, Meclofenamate sodium 15307-86-5, Diclofenac 15687-27-1, Ibuprofen **18983-79-4**, Magnesium pyruvate 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 34597-40-5, Fenoprofen calcium 36322-90-4, Piroxicam 38194-50-2, Sulindac 41340-25-4, Etodolac 42924-53-8, Nabumetone **52009-14-0**, Calcium pyruvate 64425-90-7, Choline magnesium trisalicylate, biological studies 74103-07-4, Ketorolac tromethamine 81686-75-1 149732-45-6, Propanoic acid, 2-oxo-, zinc salt
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(dermatol. wound healing compns.)
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(dermatol. wound healing compns.)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



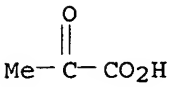
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



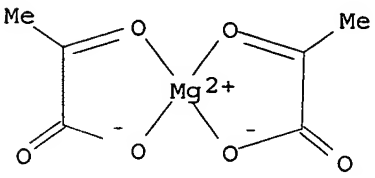
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

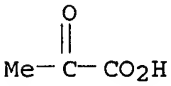


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 83 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:476855 HCAPLUS
DOCUMENT NUMBER: 125:123805
TITLE: Sunscreen-wound healing composition
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Company, USA
SOURCE: PCT Int. Appl., 137 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9617624	A1	19960613	WO 1995-US12848	19951005
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5674912	A	19971007	US 1995-446979	19950522

AU 9538596	A1	19960626	AU 1995-38596	19951005
AU 690366	B2	19980423		
EP 796107	A1	19970924	EP 1995-936858	19951005
EP 796107	B1	20030108		
R: BE, DE, FR, GB, IT, LU, NL				
ZA 9510376	A	19971006	ZA 1995-10376	19951206
PRIORITY APPLN. INFO.:			US 1994-350918	A 19941207
			US 1995-446979	A 19950522
			US 1991-663500	B1 19910301
			US 1993-53922	B2 19930426
			WO 1995-US12848	W 19951005

AB The present invention pertains to therapeutic sunscreen-wound healing compns. useful to minimize and treat sunburn damage. The compns. comprise a therapeutically effective amount of (1) a sunscreen agent; (2) an anti-inflammatory; and, (3) a wound healing composition In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic sunscreen-wound healing compns. may be utilized in a wide variety of pharmaceutical products. This invention also relates to methods for preparing and using the therapeutic sunscreen-wound healing compns. and the pharmaceutical products in which the therapeutic compns. may be used.

IC ICM A61K045-06

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 62

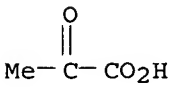
IT Antihistaminics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Fungicides and **Fungistats**
Immunostimulants
Inflammation inhibitors
Nutrients
Sunburn and Suntan
Sunscreens
Virucides and Virustats
Wound healing promoters
(sunscreen-wound healing compns. for treatment of sunburn)

IT 50-02-2, Dexamethasone 50-21-5, Lactic acid, biological studies 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-78-2, Aspirin 50-81-7, Ascorbic acid, biological studies 53-03-2, Prednisone 53-06-5, Cortisone 53-86-1, Indomethacin 57-10-3, Hexadecanoic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 57-13-6, Urea, biological studies 58-95-7, Vitamin E acetate 59-02-9, α-Tocopherol 60-33-3, 9,12-Octadecadienoic acid (Z,Z)-, biological studies 61-68-7, Mefenamic acid 68-26-8, Retinol 76-25-5, Triamcinolone acetonide 79-80-1, 3,4-Didehydroretinol 89-57-6, Mesalamine 112-80-1, 9-Octadecenoic acid (Z)-, biological studies **113-24-6**, Sodium pyruvate 118-60-5, 2-Ethylhexyl salicylate 119-13-1, δ-Tocopherol 124-94-7, Triamcinolone 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, Manganese complexes 131-57-7, Oxybenzone 134-09-8, Menthyl anthranilate 143-07-7, Dodecanoic acid, biological studies 148-03-8, β-Tocopherol 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 432-70-2, α-Carotene 463-40-1, Linolenic acid 472-92-4, δ-Carotene 472-93-5, γ-Carotene 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Tetradecanoic acid, biological studies 544-64-9, Myristoleic acid 552-94-3, Salsalate 600-22-6, Methyl pyruvate 1002-84-2, Pentadecanoic acid 1247-42-3, Methyl prednisone 1406-18-4, Vitamin E 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate 3385-03-3, Flunisolide **4151-33-1**, Potassium pyruvate 5466-77-3, Ethylhexyl

p-methoxycinnamate 5534-09-8, Beclomethasone dipropionate 6197-30-4, Octocrylene 6385-02-0, Meclofenamate sodium 6829-55-6, Tocotrienol 6969-49-9, Octyl salicylate 7235-40-7, β-Carotene 7439-96-5D, Manganese, pyruvate complexes 7616-22-0, γ-Tocopherol 10504-35-5, D-Ascorbic acid 11103-57-4, Vitamin A 13463-67-7, Titania, biological studies 15307-86-5, Diclofenac 15687-27-1, Ibuprofen 17407-37-3, Vitamin E succinate **18983-79-4**, Magnesium pyruvate 21245-02-3, Padimate o 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 29204-02-2, Gadoleic acid 34597-40-5, Fenoprofen calcium 36322-90-4, Piroxicam 38194-50-2, Sulindac 41340-25-4, Etodolac 42924-53-8, Nabumetone **52009-14-0**, Calcium pyruvate 58817-05-3 64425-90-7, Choline magnesium trisalicylate, biological studies 71276-50-1 74103-07-4, Ketorolac tromethamine 96436-87-2, Octyl p-methoxycinnamate 149732-45-6, Propanoic acid, 2-oxo-, zinc salt
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sunscreen-wound healing compns. for treatment of sunburn)

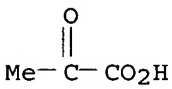
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sunscreen-wound healing compns. for treatment of sunburn)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



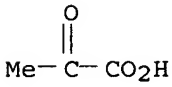
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



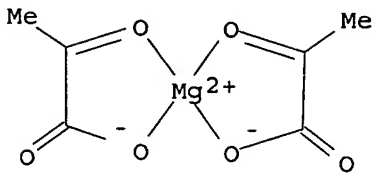
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

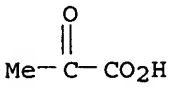


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 84 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:425310 HCAPLUS
DOCUMENT NUMBER: 125:67854
TITLE: Razor cartridges comprising wound healing compositions
INVENTOR(S): Martin, Alain; Vreeland, William Elbert; Booth, Anthony R.
PATENT ASSIGNEE(S): Warner-Lambert Company, USA
SOURCE: PCT Int. Appl., 117 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9610474	A1	19960411	WO 1995-US8433	19950707
W: AU, BR, CA, CN, JP, KR, MX, RU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9529607	A1	19960426	AU 1995-29607	19950707
EP 783398	A1	19970716	EP 1995-925499	19950707
EP 783398	B1	20020109		
R: DE, FR, GB				
JP 2002514937	T2	20020521	JP 1996-511718	19950707
PRIORITY APPLN. INFO.:			US 1994-315734 A	19940930
			US 1995-446989 A	19950522
			WO 1995-US8433 W	19950707

AB This invention pertains to therapeutic wound healing compns. useful for preventing and reducing injury to mammalian cells affixed to razor cartridges to form therapeutic razor cartridges with would healing composition In one embodiment of this invention the therapeutic would healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and

unsatd. fatty acids. This invention also pertains to methods for making and using the razor cartridges comprising therapeutic would healing compns.

IC ICM B26B021-44
ICS A61K031-20

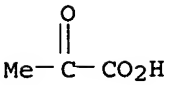
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 62

IT Anesthetics
Antihistaminics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Encapsulation
Fungicides and **Fungistats**
Immunostimulants
Inflammation inhibitors
Nutrients
Sunscreens
Virucides and Virustats
Wound healing promoters
(razor cartridges with wound healing compns. containing antioxidant, fatty acids, and pyruvate)

IT 50-21-5, Lactic acid, biological studies 50-81-7, Vitamin C, biological studies 57-10-3, Hexadecanoic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 58-95-7, Vitamin E acetate 59-02-9, α-Tocopherol 60-33-3, 9,12-Octadecadienoic acid (Z,Z)-, biological studies 68-26-8, Retinol 79-41-4D, esters, copolymers 79-80-1, 3,4-Didehydroretinol 112-80-1, 9-Octadecenoic acid (Z)-, biological studies **113-24-6**, Sodium pyruvate 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, esters and salts 143-07-7, Dodecanoic acid, biological studies 148-03-8, β-Tocopherol 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 432-70-2, α-Carotene 463-40-1, Linolenic acid 472-92-4, δ-Carotene 472-93-5, γ-Carotene 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Tetradecanoic acid, biological studies 544-64-9, Myristoleic acid 600-22-6, Methyl pyruvate 1002-84-2, Pentadecanoic acid 1406-18-4, Vitamin E 1406-18-4D, Vitamin E, esters and salts 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate 6829-55-6, Tocotrienol 7235-40-7, β-Carotene 7559-04-8, α-Tocoquinone 7616-22-0, γ-Tocopherol 9002-93-1, Triton x-100 9003-53-6, Polystyrene 10504-35-5, D-Ascorbic acid 11103-57-4, Vitamin A 17407-37-3, Vitamin E succinate **18983-79-4**, Magnesium pyruvate 29204-02-2, Gadoleic acid **52009-14-0**, Calcium pyruvate 61181-29-1 71276-50-1 81686-75-1 149732-45-6, Propanoic acid, 2-oxo-, zinc salt
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(razor cartridges with wound healing compns. containing antioxidant, fatty acids, and pyruvate)

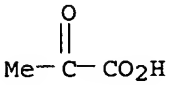
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(razor cartridges with wound healing compns. containing antioxidant, fatty acids, and pyruvate)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



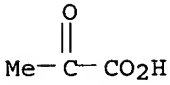
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



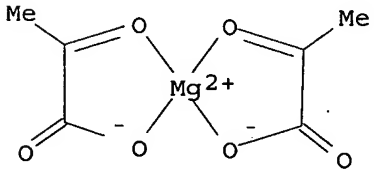
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

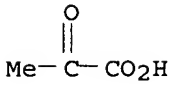


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)

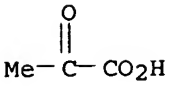


RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 85 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:396938 HCAPLUS
DOCUMENT NUMBER: 125:158927
TITLE: Effects of varying doses of hydrocortisone on the energy metabolism in rat thymocytes
AUTHOR(S): Gizatullina, Z. Z.; Sukocheva, O. A.; Gagel'gans, A. I.
CORPORATE SOURCE: Faculty Soil Biology, State Univ. Toshkent, Tashkent, 700095, Uzbekistan
SOURCE: Biokhimiya (Moscow) (1996), 61(3), 445-450
CODEN: BIOHAO; ISSN: 0320-9725
PUBLISHER: Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The dose-dependent effect of both the prolonged action of hydrocortisone (HC) in vivo (20 μg/kg of mass during 6 days daily) and the preincubation of thymocytes with 10 μM HC in vitro were cytotoxic and led to the complete uncoupling of the oxidative **phosphorylation** and decreased the rate of dinitrophenol-stimulated respiration. When glucose was used as the oxidative substrate, a short-time action of HC in vivo caused the inhibition of the respiration, while in the presence of Na pyruvate in the incubation media it stimulated the respiration.
CC 2-4 (Mammalian Hormones)
Section cross-reference(s): 13
IT **Phosphorylation**, biological
(oxidative, dose-dependent effect of hydrocortisone on energy metabolism in rat thymocytes)
IT 50-99-7, Glucose, biological studies **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(dose-dependent effect of hydrocortisone on energy metabolism in rat thymocytes)
IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(dose-dependent effect of hydrocortisone on energy metabolism in rat thymocytes)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

L102 ANSWER 86 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:367739 HCAPLUS
DOCUMENT NUMBER: 125:19043
TITLE: Bioadhesive-wound healing composition
INVENTOR(S): Leung, Sau-Hung S.; Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Company, USA
SOURCE: PCT Int. Appl., 159 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9606640	A1	19960307	WO 1995-US8568	19950707
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5658956	A	19970819	US 1995-445824	19950522
AU 9530045	A1	19960322	AU 1995-30045	19950707
AU 707353	B2	19990708		
EP 779820	A1	19970625	EP 1995-926209	19950707
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI				
JP 10505057	T2	19980519	JP 1996-508729	19950707
ZA 9507245	A	19970630	ZA 1995-7245	19950829

PRIORITY APPLN. INFO.:

US 1994-298521	A	19940830
US 1995-445824	A	19950522
US 1991-663500	B1	19910301
US 1993-53922	B2	19930426
WO 1995-US8568	W	19950707

AB The present invention pertains to therapeutic bioadhesive-wound healing compns. useful for treating wounds and increasing the proliferation and resuscitation rate of mammalian cells. The compns. comprise a bioadhesive agent and a therapeutically effective amount of a wound healing composition In one embodiment the wound healing composition comprises (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic bioadhesive-wound healing compns. may further comprise medicaments such as antiviral agents, antikeratolytic agents, anti-inflammatory agents, antifungal agents, antibacterial agents, immunostimulating agents, and the like. The bioadhesive-wound healing compns. may be utilized in a wide variety of pharmaceutical products. This invention also relates to methods for preparing and using the bioadhesive-wound healing compns. and the pharmaceutical products in which the compns. may be used.

IC ICM A61K045-06
ICS A61K031-355
ICI A61K031-355, A61K031-20, A61K031-19
CC 63-6 (Pharmaceuticals)
IT Anesthetics

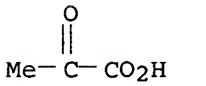
Antibiotics
Antihistaminics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Cell proliferation
Cytotoxic agents
Fungicides and **Fungistats**
Immunostimulants
Inflammation inhibitors
Nutrients
Sunscreens
Virucides and Virustats
Wound healing
Wound healing promoters
(bioadhesive, topical wound healing compns. containing pyruvates, antioxidants, and fatty acids)

IT 50-02-2, Dexamethasone 50-21-5, Lactic acid, biological studies 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-78-2, Aspirin 50-81-7, Vitamin C, biological studies 53-03-2, Prednisone 53-06-5, Cortisone 53-86-1, Indomethacin 56-75-7, Chloramphenicol 57-10-3, Hexadecanoic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 57-13-6, Urea, biological studies 57-62-5, Chlortetracycline 57-92-1, Streptomycin, biological studies 58-95-7, Vitamin E acetate 59-01-8, Kanamycin 59-02-9, α-Tocopherol 59-87-0, Nitrofurazone 60-33-3, 9,12-Octadecadienoic acid (Z,Z)-, biological studies 60-54-8, Tetracycline 61-33-6, Penicillin G, biological studies 61-68-7, Mefenamic acid 65-85-0, Benzoic acid, biological studies 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 68-26-8, Retinol 69-53-4, Ampicillin 69-72-7, biological studies 76-25-5, Triamcinolone acetonide 79-57-2, Oxytetracycline 79-80-1, 3,4-Didehydroretinol 83-43-2, Methyl prednisolone 87-08-1, Penicillin V 89-57-6, Mesalamine 99-26-3, Bismuth subgallate 108-95-2, Phenol, biological studies 110-44-1, Sorbic acid 112-80-1, 9-Octadecenoic acid (Z)-, biological studies **113-24-6**, Sodium pyruvate 114-07-8, Erythromycin 118-60-5, 2-Ethylhexyl salicylate 119-13-1, δ-Tocopherol 124-94-7, Triamcinolone 127-17-3, Pyruvic acid, biological studies 131-57-7, Oxybenzone 134-09-8, Menthyl anthranilate 143-07-7, Dodecanoic acid, biological studies 147-24-0, Diphenhydramine hydrochloride 148-03-8, β-Tocopherol 153-61-7, Cephalothin 302-79-4, Tretinoin 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 432-70-2, α-Carotene 443-48-1, Metronidazole 463-40-1, Linolenic acid 472-92-4, δ-Carotene 472-93-5, γ-Carotene 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Tetradecanoic acid, biological studies 544-64-9, Myristoleic acid 552-94-3, Salsalate 564-25-0, Doxycycline 600-22-6, Methyl pyruvate 637-58-1, Pramoxine hydrochloride 665-66-7, Amantadine hydrochloride 1002-84-2, Pentadecanoic acid 1344-85-0, Bismuth aluminate 1403-66-3, Gentamycin 1404-04-2, Neomycin 1405-87-4, Bacitracin 1406-05-9, Penicillin 1406-11-7, Polymyxin 1406-18-4, Vitamin E 1406-18-4D, Vitamin E, esters and salts 1981-50-6, Margaroleic acid 2134-78-3 **2922-61-4**, Lithium pyruvate 3385-03-3, Flunisolide **4151-33-1**, Potassium pyruvate 5466-77-3, Ethylhexyl p-methoxycinnamate 5534-09-8, Beclomethasone dipropionate 5536-17-4, Vidarabine 5593-20-4, Betamethasone dipropionate 6197-30-4, Octocrylene 6385-02-0, Meclofenamate sodium 6506-37-2, Nimorazole 6829-55-6, Tocotrienol 6969-49-9, Octyl salicylate 6998-60-3, Rifamycin 7235-40-7, β-Carotene 7616-22-0, γ-Tocopherol 9000-30-0, Guar gum 9003-01-4, Polyacrylic acid 9003-97-8, Polycarbophil 9004-32-4, Sodium CM-cellulose 9004-67-5, Methyl cellulose 10504-35-5, D-Ascorbic acid

11103-57-4, Vitamin A 11111-12-9D, Cephalosporin, derivs. 13463-67-7, Titania, biological studies 14882-18-9, Bismuth subsalicylate 15307-86-5, Diclofenac 15686-71-2, Cephalexin 15687-27-1, Ibuprofen 17407-37-3, Vitamin E succinate 18323-44-9, Clindamycin **18983-79-4**, Magnesium pyruvate 19387-91-8, Tinidazole 21245-02-3, Padimate o 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 22916-47-8, Miconazole 23593-75-1, Clotrimazole 25655-41-8, Povidone iodine 26787-78-0, Amoxicillin 29204-02-2, Gadoleic acid 30516-87-1, Zidovudine 34597-40-5, Fenoprofen calcium 36322-90-4, Piroxicam 36791-04-5, Ribavirin 38194-50-2, Sulindac 41340-25-4, Etodolac 42924-53-8, Nabumetone **52009-14-0**, Calcium pyruvate 57644-54-9, Bismuth subcitrate 58817-05-3 59277-89-3, Acyclovir 63585-09-1, Foscarnet sodium 64425-90-7, Choline magnesium trisalicylate, biological studies 64872-76-0, Butoconazole 65899-73-2, Tioconazole 71276-50-1 74103-07-4, Ketorolac tromethamine 81686-75-1 96436-87-2, Octyl p-methoxycinnamate 107910-75-8, Ganciclovir sodium 149732-45-6, Propanoic acid, 2-oxo-, zinc salt 152521-52-3, Betafectin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(bioadhesive, topical wound healing compns. containing pyruvates, antioxidants, and fatty acids)

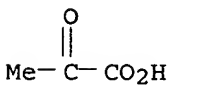
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(bioadhesive, topical wound healing compns. containing pyruvates, antioxidants, and fatty acids)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



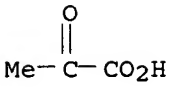
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



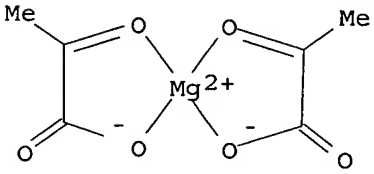
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

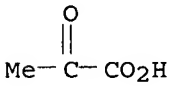


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 87 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:318495 HCAPLUS
DOCUMENT NUMBER: 124:352761
TITLE: Antifungal-wound healing compositions containing pyruvates and antioxidants and fatty acids
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Company, USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9603149	A1	19960208	WO 1995-US8551	19950707
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5663208	A	19970902	US 1995-445831	19950522
AU 9530042	A1	19960222	AU 1995-30042	19950707
AU 701179	B2	19990121		
EP 773795	A1	19970521	EP 1995-926203	19950707

R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI

JP 10503200	T2	19980324	JP 1995-505755	19950707
ZA 9506117	A	19970421	ZA 1995-6117	19950721
PRIORITY APPLN. INFO.:			US 1994-279462	A 19940722
			US 1995-445831	A 19950522
			US 1991-663500	B1 19910301
			US 1993-53922	B2 19930426
			WO 1995-US8551	W 19950707

AB Therapeutic antifungal-wound healing compns. comprise (a) pyruvate; (b) an antioxidant; and (c) a mixture of saturated and unsatd. fatty acids. The therapeutic antifungal-wound healing compns. may be utilized in a wide variety of topical and oral pharmaceutical products. A wound healing composition contained sodium pyruvate 2, vitamin E 1, chicken fat 2, LYCD 2400U, shark liver oil 3, petrolatum 64, mineral oil 22.53, paraffin 5, and emulsifier 0.2%. The above composition was applied on a 3 cm full thickness longitudinal incision on the back of hairless mice once/day for 7 days. The composition was significantly better than preparation H and there was less scar tissue present at day 7 on the skin.

IC ICM A61K045-06
ICS A61K031-355

ICI A61K031-355, A61K031-20, A61K031-19

CC 63-6 (Pharmaceuticals)

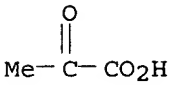
IT Anesthetics
Antihistaminics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Culture media
Fungicides and **Fungistats**
Immunostimulants
Inflammation inhibitors
Sunscreens
Virucides and Virustats
Wound healing
(antifungal-wound healing compns. containing pyruvates and antioxidants and fatty acids)

IT 50-02-2, Dexamethasone 50-21-5, Lactic acid, biological studies 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-78-2, Acetylsalicylic acid 50-81-7, Vitamin c, biological studies 53-03-2, Prednisone 53-06-5, Cortisone 53-86-1, Indomethacin 58-95-7, Vitamin e acetate 59-02-9, α-Tocopherol 61-68-7, Mefenamic acid 76-25-5, Triamcinolone acetonide 79-80-1, 3,4-Didehydroretinol 83-43-2, Methyl prednisolone 89-57-6, Mesalamine 110-44-1, Sorbic acid **113-24-6**, Sodium pyruvate 119-13-1, δ-Tocopherol 124-94-7, Triamcinolone 127-17-3, Pyruvic acid, biological studies 148-03-8, β-Tocopherol 328-50-7, α-Ketoglutaric acid 472-92-4, δ-Carotene 472-93-5, γ-Carotene 552-94-3, Salsalate 600-22-6, Methyl pyruvate 1406-18-4, Vitamin e **2922-61-4**, Lithium pyruvate 3385-03-3, Flunisolide **4151-33-1**, Potassium pyruvate 5534-09-8, Beclomethasone dipropionate 5593-20-4, Betamethasone dipropionate 6385-02-0, Meclofenamate sodium 6829-55-6, Tocotrienol 7235-40-7, β-Carotene 7488-99-5, α-Carotene 7559-04-8 7616-22-0, γ-Tocopherol 11103-57-4, Vitamin a 15307-86-5, Diclofenac 15687-27-1, Ibuprofen **18983-79-4**, Magnesium pyruvate 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 34597-40-5, Fenoprofen calcium 36322-90-4, Piroxicam 37311-39-0, Vitamin e succinate 38194-50-2, Sulindac 41340-25-4, Etodolac 42924-53-8, Nabumetone **52009-14-0**, Calcium pyruvate 64425-90-7, Choline magnesium trisalicylate, biological studies 71276-50-1 74103-07-4, Ketorolac

tromethamine 81686-75-1 149732-45-6
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antifungal-wound healing compns. containing pyruvates and antioxidants and fatty acids)

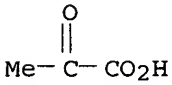
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antifungal-wound healing compns. containing pyruvates and antioxidants and fatty acids)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



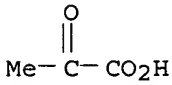
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



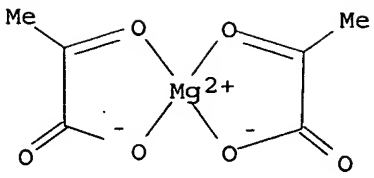
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

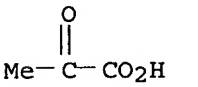


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 88 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:171907 HCAPLUS
DOCUMENT NUMBER: 124:212140
TITLE: Anti-inflammatory wound healing compositions containing pyruvates and antioxidants and fatty acids
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: PCT Int. Appl., 113 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9600584	A1	19960111	WO 1995-US7942		19950622
W: AU, CA, JP, MX, NZ, SG					
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
US 5648380	A	19970715	US 1995-445845		19950522
AU 9529080	A1	19960125	AU 1995-29080		19950622
AU 701454	B2	19990128			
EP 759783	A1	19970305	EP 1995-924660		19950622
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI					
JP 10502345	T2	19980303	JP 1995-503323		19950622
NZ 289287	A	20010223	NZ 1995-289287		19950622
ZA 9505408	A	19970401	ZA 1995-5408		19950629
PRIORITY APPLN. INFO.:			US 1994-268429	A	19940630
			US 1995-445845	A	19950522
			US 1991-663500	B1	19910301
			US 1993-53922	B2	19930426
			WO 1995-US7942	W	19950622

AB Therapeutic anti-inflammatory wound healing compns. comprise a therapeutically effective amount of one or more anti-inflammatory agents and a wound healing composition A wound healing composition contained sodium pyruvate 2
(I), vitamin E (II) 1, chicken fat 2 (III), shark liver oil 3, petrolatum

64, mineral oil 22.53, paraffin 5, emulsifier 0.2% and live yeast cell derivative 2400 U. The composition was significantly better wound healing composition than controls with no I, II, and III in healing incision wound in mice skin.

IC ICM A61K045-06

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 1

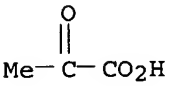
IT Acne
Anesthetics
Antihistaminics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Burn
Fungicides and **Fungistats**
Immunostimulants
Inflammation inhibitors
Nutrients
Sunburn and Suntan
Sunscreens
Virucides and Virustats
Wound healing
(anti-inflammatory wound healing compns. containing pyruvates and antioxidants and fatty acids)

IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-78-2, Acetylsalicylic acid 50-81-7, Vitamin c, biological studies 53-03-2, Prednisone 53-06-5, Cortisone 53-86-1, Indomethacin 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 58-95-7, Vitamin e acetate 59-02-9, α-Tocopherol 60-33-3, Linoleic acid, biological studies 61-68-7, Mefenamic acid 68-26-8, Vitamin a 76-25-5, Triamcinolone acetonide 79-80-1, 3,4-Didehydroretinol 83-43-2, Methyl prednisolone 89-57-6, Mesalamine 112-80-1, Oleic acid, biological studies **113-24-6**, Sodium pyruvate 119-13-1, δ-Tocopherol 124-94-7, Triamcinolone 127-17-3, Pyruvic acid, biological studies 143-07-7, Lauric acid, biological studies 148-03-8, β-Tocopherol 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 432-70-2, α-Carotene 472-92-4, δ-Carotene 472-93-5, γ-Carotene 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Myristic acid, biological studies 544-64-9, Myristoleic acid 552-94-3, Salicylsalicylic acid 600-22-6, Methyl pyruvate 1002-84-2, Pentadecanoic acid 1406-18-4, Vitamin e 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate 3385-03-3, Flunisolide **4151-33-1**, Potassium pyruvate 5534-09-8, Beclomethasone dipropionate 5593-20-4, Betamethasone dipropionate 6385-02-0, Meclofenamate sodium 6829-55-6, Tocotrienol 7235-40-7, β-Carotene 7616-22-0, γ-Tocopherol 10504-35-5, D-Ascorbic acid 15307-86-5, Diclofenac 15687-27-1, Ibuprofen **18983-79-4**, Magnesium pyruvate 22071-15-4, Ketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 24887-16-9, Zinc, bis(2-oxopropanoato-O1,O2)-, (T-4)- 29204-02-2, Gadoleic acid 34597-40-5 36322-90-4, Piroxicam 37311-39-0, Vitamin e succinate 38194-50-2, Sulindac 41340-25-4, Etodolac 42924-53-8, Nabumetone **52009-14-0**, Calcium pyruvate 64425-90-7, Choline magnesium trisalicylate, biological studies 71276-50-1, 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-, dihydrogenphosphate, [2R-[2R*(4R*,8R*)]]- 74103-07-4, Ketorolac tromethamine 145482-34-4, Manganese, bis(2-oxopropanoato-O1,O2)-
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL

(Biological study); USES (Uses)
(anti-inflammatory wound healing compns. containing pyruvates and antioxidants and fatty acids)

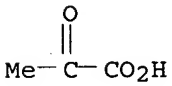
IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(anti-inflammatory wound healing compns. containing pyruvates and antioxidants and fatty acids)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



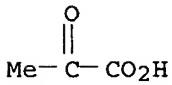
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



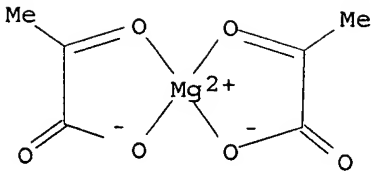
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

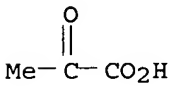


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 89 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:171900 HCAPLUS
DOCUMENT NUMBER: 124:212068
TITLE: Antikeratolytic wound healing compositions containing pyruvates and antioxidants and fatty acids
INVENTOR(S): Martin, Alain
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 28
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9600572	A1	19960111	WO 1995-US7941	19950622
W: AU, CA, JP, MX, NZ, SG				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5641814	A	19970624	US 1995-445808	19950522
AU 9528707	A1	19960125	AU 1995-28707	19950622
AU 701301	B2	19990121		
EP 768877	A1	19970423	EP 1995-924046	19950622
R: BE, CH, DE, DK, ES, FR, GB, GR, IT				
JP 10502344	T2	19980303	JP 1995-503322	19950622
NZ 288995	A	20010223	NZ 1995-288995	19950622
ZA 9505409	A	19970401	ZA 1995-5409	19950629
PRIORITY APPLN. INFO.:			US 1994-268772 A	19940630
			US 1995-445808 A	19950522
			US 1991-663500 B2	19910301
			US 1993-53922 B1	19930426
			WO 1995-US7941 W	19950622

AB Therapeutic antikeratolytic wound healing compns. comprise a therapeutically effective amount of one or more antikeratolytic agents and a wound healing composition A wound healing composition contained sodium pyruvate 2
(I), vitamin E (II) 1, chicken fat 2 (III), shark liver oil 3, petrolatum

64, mineral oil 22.53, paraffin 5, emulsifier 0.2% and live yeast cell derivative 2400 U. The composition was significantly better wound healing composition than controls with no I, II, and III in healing incision wound in mice skin.

IC ICM A61K031-355
ICS A61K031-60

ICI A61K031-60, A61K031-355, A61K031-20, A61K031-19, A61K031-17

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

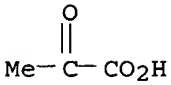
IT Acne
Anesthetics
Antihistaminics
Antioxidants
Bactericides, Disinfectants, and Antiseptics
Burn
Fungicides and **Fungistats**
Immunostimulants
Inflammation inhibitors
Nutrients
Reducing agents
Sunburn and Suntan
Sunscreens
Virucides and Virustats
Wound healing
(antikeratolytic wound healing compns. containing pyruvates and antioxidants and fatty acids)

IT 50-21-5, Lactic acid, biological studies 50-81-7, Vitamin c, biological studies 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 57-13-6, Urea, biological studies 58-95-7, Vitamin e acetate 59-02-9, α-Tocopherol 60-33-3, Linoleic acid, biological studies 69-72-7, Salicylic acid, biological studies 79-80-1, 3,4-Didehydroretinol 112-80-1, Oleic acid, biological studies **113-24-6**, Sodium pyruvate 119-13-1, δ-Tocopherol 127-17-3, Pyruvic acid, biological studies 143-07-7, Lauric acid, biological studies 148-03-8, β-Tocopherol 328-50-7, α-Ketoglutaric acid 373-49-9, Palmitoleic acid 432-70-2, α-Carotene 472-92-4, δ-Carotene 472-93-5, γ-Carotene 506-12-7, Margaric acid 506-30-9, Arachidic acid 544-63-8, Myristic acid, biological studies 544-64-9, Myristoleic acid 552-94-3, Salicylsalicylic acid 600-22-6, Methyl pyruvate 1002-84-2, Pentadecanoic acid 1406-18-4, Vitamin e 1981-50-6, Margaroleic acid **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate 6829-55-6, Tocotrienol 7235-40-7, β-Carotene 7616-22-0, γ-Tocopherol 10504-35-5, D-Ascorbic acid 11103-57-4, Vitamin a **18983-79-4**, Magnesium pyruvate 24887-16-9, Zinc, bis(2-oxopropanoato-O1,O2)-, (T-4)- 29204-02-2, Gadoleic acid 37311-39-0, Vitamin e succinate **52009-14-0**, Calcium pyruvate 71276-50-1, 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-, dihydrogenphosphate, [2R-[2R*(4R*,8R*)]]- 145482-34-4, Manganese, bis(2-oxopropanoato-O1,O2)-
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antikeratolytic wound healing compns. containing pyruvates and antioxidants and fatty acids)

IT **113-24-6**, Sodium pyruvate **2922-61-4**, Lithium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU

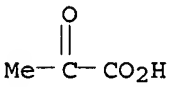
(Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antikeratolytic wound healing compns. containing pyruvates and antioxidants and fatty acids)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



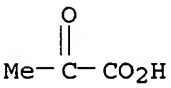
● Na

RN 2922-61-4 HCAPLUS
CN Propanoic acid, 2-oxo-, lithium salt (9CI) (CA INDEX NAME)



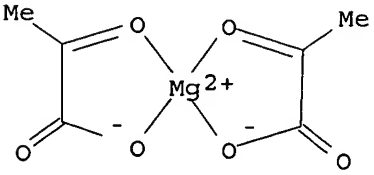
● Li

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

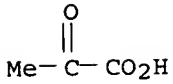


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 90 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:982407 HCAPLUS
DOCUMENT NUMBER: 124:15482
TITLE: Bioactive and/or targeted dendrimer conjugates
INVENTOR(S): Tomalia, Donald A.; Baker, James R.; Bielinska, Anna U.; Brothers, Herbert M., II; Cheng, Roberta C.; Fazio, Michael J.; Hedstrand, David M.; Johnson, Jennifer A.; Kaplan, Donald A.; et al.
PATENT ASSIGNEE(S): Dow Chemical Co., USA; Dendritech Inc.; Regents of the University of Michigan
SOURCE: PCT Int. Appl., 252 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9524221	A1	19950914	WO 1995-US3045	19950307
W: AU, BR, CA, CN, CZ, EE, FI, GE, HU, JP, KR, LT, LV, MX, NO, NZ, PL, PT, RU, SI, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
BR 8707431	A	19881101	BR 1987-7431	19870419
AT 89743	E	19930615	AT 1987-307266	19870817
JP 63501878	T2	19880728	JP 1987-505282	19870818
JP 07002840	B4	19950118		
JP 63502350	T2	19880908	JP 1987-505084	19870818
JP 07057735	B4	19950621		
BR 8707433	A	19881101	BR 1987-7433	19870818
FI 8801768	A	19880415	FI 1988-1768	19880415
FI 103410	B1	19990630		
US 5338532	A	19940816	US 1991-654851	19910213
US 5527524	A	19960618	US 1993-43198	19930405
CA 2161684	AA	19950914	CA 1995-2161684	19950307
AU 9521181	A1	19950925	AU 1995-21181	19950307
EP 699079	A1	19960306	EP 1995-914006	19950307
EP 699079	B1	20040929		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
ZA 9501877	A	19960909	ZA 1995-1877	19950307
JP 08510761	T2	19961112	JP 1995-523673	19950307
RU 2127125	C1	19990310	RU 1995-122714	19950307
IL 128773	A1	20010520	IL 1995-128773	19950307
IL 128774	A1	20010520	IL 1995-128774	19950307
IL 128775	A1	20010520	IL 1995-128775	19950307
PL 181064	B1	20010531	PL 1995-311633	19950307
PL 182237	B1	20011130	PL 1995-335982	19950307
IL 112920	A1	20030410	IL 1995-112920	19950307
AT 277640	E	20041015	AT 1995-914006	19950307
FI 9505320	A	19951124	FI 1995-5320	19951106

NO 9504434	A	19960105	NO 1995-4434	19951106
NO 317691	B1	20041206		
FI 9801807	A	19980824	FI 1998-1807	19980824
FI 105693	B1	20000929		
AU 2002029312	A5	20020523	AU 2002-29312	20020328
AU 768662	B2	20031218		

PRIORITY APPLN. INFO.:

US 1986-897455	A2 19860818
US 1987-87266	A2 19870818
US 1989-386049	A2 19890726
US 1991-654851	A2 19910213
US 1993-43198	A2 19930405
US 1994-207494	A2 19940307
US 1994-316536	A2 19940930
EP 1987-307266	A 19870817
WO 1987-US2075	W 19870818
WO 1987-US2076	A 19870818
IL 1995-112920	A3 19950307
WO 1995-US3045	W 19950307
AU 1999-64440	A3 19991210

AB Dendritic polymer conjugates which are composed of at least one dendrimer in association with at least one unit of a carried material, where the carrier material can be a biol. response modifier, have been prepared The conjugate can also have a target director present, and when it is present, then the carried material may be a bioactive agent. Preferred dendritic polymers are dense star polymers, which have been complexed with biol. response modifiers. These conjugates and complexes have particularly advantageous properties due to their unique characteristics.

IC ICM A61K047-48
ICS C12N015-87

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 5, 35

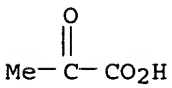
IT Lymphokines and Cytokines
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**tumor** necrosis factor, bioactive and/or targeted dendrimer conjugates)

IT 50-78-2DP, Aspirin, reaction products with Starburst polyamidoamine 58-85-5DP, Biotin, reaction products with Starburst polyamidoamine 67-43-6DP, Dtpa, reaction products with Starburst polyamidoamine 69-72-7DP, reaction products with Starburst polyamidoamine 79-10-7DP, 2-Propenoic acid, reaction products with Starburst polyamidoamine 90-82-4DP, Pseudoephedrine, reaction products with Starburst polyamidoamine 94-75-7DP, 2,4-D, reaction products with Starburst polyamidoamine 107-15-3DP, 1,2-Ethanediamine, reaction products with Starburst polyamidoamine **113-24-6DP**, Sodium pyruvate, reaction products with Starburst polyamidoamine 118-48-9DP, Isatoic anhydride, reaction products with Starburst polyamidoamine 137-40-6DP, Sodium propionate, reaction products with Starburst polyamidoamine 301-04-2DP, Lead acetate, complexes with Starburst polyamidoamine 350-46-9DP, 4-Fluoronitrobenzene, reaction products with Starburst polyethylenimine 463-71-8DP, Carbonothioic dichloride, reaction products starburst dendrimers 605-65-2DP, Dansyl chloride, reaction products with Starburst polyamidoamine 2321-07-5DP, reaction products with Starburst polyamidoamine 2984-50-1DP, 1,2-Epoxyoctane, reaction products with Starburst polyamidoamine 7390-81-0DP, reaction products with Starburst polyamidoamine 7439-89-6DP, Iron, complexes with Starburst polyamidoamine 7439-96-5DP, Manganese, complexes with Starburst polyamidoamine 7440-02-0DP, Nickel, complexes with Starburst polyamidoamine 7440-05-3DP, Palladium, complexes with Starburst polyamidoamine 7440-16-6DP, Rhodium, complexes with Starburst polyamidoamine 7440-54-2DP, Gadolinium, complexes with Starburst

polyamidoamine 7440-65-5DP, Yttrium, complexes with Starburst polyamidoamine 7665-72-7DP, tert-Butyl glycidyl ether, reaction products with Starburst polyamidoamine 7705-08-0DP, Ferric chloride, complexes with Starburst polyamidoamine 7773-01-5DP, Manganese chloride, complexes with Starburst polyamidoamine 9003-99-0DP, Peroxidase, reaction products with Starburst polyamidoamine 9004-10-8DP, Insulin, reaction products with Starburst polyamidoamine 10098-91-6DP, Yttrium 90, complexes with Starburst polyamidoamine, biological studies 21293-29-8DP, Abscisic acid, reaction products with Starburst polyamidoamine 22663-09-8DP, Methyl 10,11-epoxyundecanoate, reaction products with Starburst polyamidoamine 23911-26-4DP, DTPA anhydride, reaction products with Starburst polyamidoamine 30953-20-9DP, Bradykinin potentiator C, reaction products with Starburst polyamidoamine 51306-35-5DP, reaction products with Starburst polyamidoamine 51908-46-4DP, N-Dansylaziridine, reaction products with Starburst polyamidoamine 66556-73-8DP, reaction products with Starburst polyamidoamine 76823-03-5DP, 5-Carboxyfluorescein, reaction products with Starburst polyamidoamine 106754-95-4DP, 4'-Aminomethylfluorescein, reaction products with Starburst polyamidoamine 115234-09-8DP, reaction products with Starburst polyamidoamine 119822-32-1P 130707-76-5DP, reaction products with Starburst polyamidoamine 171409-40-8DP, reaction products with ethylenediamine and Me acrylate 171409-40-8P 171409-41-9P
RL: SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(bioactive and/or targeted dendrimer conjugates)

IT **113-24-6DP**, Sodium pyruvate, reaction products with Starburst polyamidoamine
RL: SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(bioactive and/or targeted dendrimer conjugates)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)

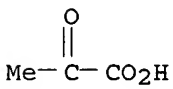


Na

L102 ANSWER 91 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:537116 HCAPLUS
DOCUMENT NUMBER: 122:287958
TITLE: Role of glycolysis in genesis of early postocclusion arrhythmias
AUTHOR(S): Sernov, L. N.; Balashov, V. P.; Kostin, Ya. V.; Sedova, D. G.; Gatsura, V. V.
CORPORATE SOURCE: Mordov Univ., Saransk, Russia
SOURCE: Byulleten Eksperimental'noi Biologii i Meditsiny (1994), 117(6), 625-6
CODEN: BEBMAE; ISSN: 0365-9615
PUBLISHER: Meditsina
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB In rats, **phosphorylated** intermediates of glycolysis, glucose-1-phosphate, fructose-1,6-diphosphate, and phosphoenolpyruvate had

an anti-arrhythmic effect on the early postocclusion arrhythmias, whereas D-glucose, sodium pyruvate, and monoiodoacetate (an inhibitor of glycolysis) did not have any anti-arrhythmic effect.
CC 14-5 (Mammalian Pathological Biochemistry)
IT 50-99-7, D Glucose, biological studies 59-56-3, Glucose-1-phosphate **113-24-6**, Sodium pyruvate 138-08-9 488-69-7, Fructose-1,6-diphosphate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(glycolysis intermediates effect on early postocclusion arrhythmias)
IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(glycolysis intermediates effect on early postocclusion arrhythmias)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



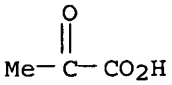
Na

L102 ANSWER 92 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:528712 HCAPLUS
DOCUMENT NUMBER: 122:256427
TITLE: Use of pyruvate salt to prevent neuronal degeneration associated with ischemia
INVENTOR(S): Izumi, Yukitoshi; Olney, John W.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5395822	A	19950307	US 1993-124348	19930920
PRIORITY APPLN. INFO.:			US 1993-124348	19930920

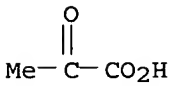
AB A method is disclosed for using a pyruvic acid salt (e.g. sodium pyruvate) to protect against neuronal degeneration due to ischemia (inadequate blood flow, which can be caused by stroke, cardiac arrest, or other events) or due to hypoxia, hypoglycemia, or cellular disorders which interfere with the energy metabolism of neurons. Treatment with pyruvate can be effective even when administered after the onset of an event that triggers neurodegeneration. A preferred mode of use involves co-administration of a pyruvate salt along with one or more agents that block NMDA and/or non-NMDA receptors, or with insulin or a thrombolytic agent. In vitro hippocampal slice studies showing protection against ischemic neurodegeneration by pyruvate are described.
IC ICM A61K037-26
ICS A61K031-19
INCL 514003000

CC 1-11 (Pharmacology)
IT Brain, disease
(**stroke**, pyruvate salt for prevention of neuronal degeneration associated with ischemia or other causes)
IT **113-24-6**, Sodium pyruvate 127-17-3D, Pyruvic acid, salts **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvate salt for prevention of ischemia-associated neuronal degeneration)
IT **113-24-6**, Sodium pyruvate **4151-33-1**, Potassium pyruvate **18983-79-4**, Magnesium pyruvate **52009-14-0**, Calcium pyruvate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyruvate salt for prevention of ischemia-associated neuronal degeneration)
RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



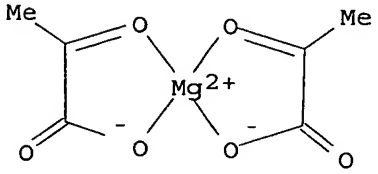
● Na

RN 4151-33-1 HCAPLUS
CN Propanoic acid, 2-oxo-, potassium salt (9CI) (CA INDEX NAME)

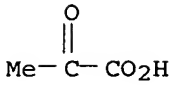


● K

RN 18983-79-4 HCAPLUS
CN Magnesium, bis[2-(oxo-κO)propanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 52009-14-0 HCAPLUS
CN Propanoic acid, 2-oxo-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

L102 ANSWER 93 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:340459 HCAPLUS
DOCUMENT NUMBER: 122:102403
TITLE: Neural plate microvillus lengthening in rat embryos grown in various concentrations of glucose and further studies of the mechanisms
AUTHOR(S): Shepard, Thomas H.; Park, Hyoung Woo
CORPORATE SOURCE: Dep. Pediatrics, Univ. Washington, Seattle, WA, 98195, USA
SOURCE: Teratology (1994), 50(5), 340-7
CODEN: TJADAB; ISSN: 0040-3709
PUBLISHER: Wiley-Liss
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Glucose is an important cellular nutrient, and in the early embryo, which is dependent mostly on anaerobic glycolysis, it is even more essential. Based on tissue culture cells in which glucose utilization has become membrane-limited, a concept has been developed that the tip of the microvilli is the entrance compartment for glucose and that the shaft sets up a diffusion barrier. An increase in length of the microvillus is associated with decreased entry of **phosphorylated** hexose into the cells. The previous findings of lengthening of the microvilli of the neural plate cells after 40 min exposure to glucose at room temperature have been extended to a 17 h whole embryo culture system. In cultures where the final concentration of glucose was 20 and 24 mg/dL there was embryonic death.

In those cultures ending with 29-137 mg/dL of glucose the embryos developed normally. Those grown in dialyzed serum supplemented with B vitamins and glucose grew equally as well as those in whole rat serum. Somite nos. attained did not change with increasing glucose concentration but a modest increase in micromoles of glucose used per embryo was found, suggesting the presence of another source of energy at lower glucose concns. The average glucose utilization per g of protein per h was 844 μmol in these day 9.5-10 embryos and this compares to 733 μmol previously found using uniformly labeled 14C glucose on day 10.3. Lactate production averaged 85% of the glucose utilized. Pyruvate did not support growth in the absence of glucose. Lengthening of the microvilli was studied using SEM and an associate between increasing glucose concentration and lengthening (with matting) of the microvilli was shown after whole embryo culture and after 40 min exposure at room temperature In whole culture the microvilli were short in cultures ending with glucose concns. below 30 mg/dL, partially matted at 36-81 mg/dL, and fully matted at 78-137 mg/dL. Elongation of microvilli was found in the mouse during the early somite neural plate stage, but the microvilli were more sparse and the cells contained a single cilium. These later two differences might explain the increased sensitivity to hypoglycemia in the mouse. These studies were done after exposure to glucose at 150 mg/dL for 40 min at room temperature Also

at room temperature, day 9.5 rat neural epithelial microvilli lengthened when

exposed to glucose. Studies for 40 min at room temperature were carried out to investigate the mechanism of lengthening. L-Glucose, fructose, galactose, and pyruvate, which are not transported and **phosphorylated**, did not cause microvillar lengthening. 2-Deoxyglucose, which is transported and **phosphorylated** but does not enter the glycolytic pathway, caused microvillar lengthening. Cytochalasin D, which interferes with actin polymerization, caused marked shortening and ballooning of the microvilli.

The elongation of microvilli exposed to glucose at room temperature was reversed by a 40 min exposure to glucose-free Hanks' balanced **salt** solution

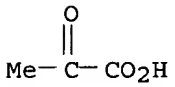
CC 13-3 (Mammalian Biochemistry)

IT 50-21-5, Lactic acid, biological studies 50-99-7, D-Glucose, biological studies **127-17-3**, Pyruvic acid, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(neural plate microvillus lengthening in rat embryos grown in various concns. of glucose)

IT **127-17-3**, Pyruvic acid, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(neural plate microvillus lengthening in rat embryos grown in various concns. of glucose)

RN 127-17-3 HCAPLUS

CN Propanoic acid, 2-oxo- (9CI) (CA INDEX NAME)



L102 ANSWER 94 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:73086 HCAPLUS

DOCUMENT NUMBER: 120:73086

TITLE: Inter-connection between activities of nitrogenase and hydrogenase in free-living strain of Rhizobium arachis

AUTHOR(S): Xu, Liangshu; Liu, Weimin; Zeng, Ding; Zhang, Fengzhang

CORPORATE SOURCE: Dep. Biol., Xiamen Univ., Xiamen, Peop. Rep. China

SOURCE: Xiamen Daxue Xuebao, Ziran Kexueban (1992), 31(4), 419-24
CODEN: HMHHAF; ISSN: 0438-0479

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Both nitrogenase and hydrogenase activities of R. arachis strain X8-1 can be expressed in free-living cultures. H2, produced by nitrogenase, induced the hydrogenase, consequently the time course plot of the hydrogenase activity lagged behind the nitrogenase activity. However, time course plots of the activities of nitrogenase and hydrogenase activities were synchronous if the exogenous H2 was added in the begining of culture. Compared the effect of some carbon compds. on nitrogenase and hydrogenase activities, supported the nitrogenase activity but their effect on hydrogenase activity was slight. On the contrary, sucrose and maltose were more efficient, for increasing hydrogenase activity than for nitrogenase activity. H2 significantly enhanced nitrogenase activity. 2,4-Dinitrophenol, an uncoupler of oxidative **phosphorylation**,

inhibited the H2-dependent C2H2 reduction This inhibition was more efficient in the presence of exogenous H2. Ammonium inhibited nitrogenase activity. Hydrogenase activity also was inhibited unless exogenous H2 was added.

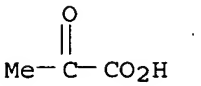
CC 10-2 (Microbial, Algal, and Fungal Biochemistry)

IT 57-50-1, Sucrose, biological studies 63-42-3, Lactose 69-65-8, Mannitol **113-24-6**, Sodium pyruvate 147-81-9, Arabinose 14047-56-4, Sodium succinate 16177-21-2, Sodium glutamate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(hydrogenase and nitrogenase of Rhizobium arachis response to)

IT **113-24-6**, Sodium pyruvate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(hydrogenase and nitrogenase of Rhizobium arachis response to)

RN 113-24-6 HCAPLUS

CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



Na

L102 ANSWER 95 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:580818 HCAPLUS

DOCUMENT NUMBER: 119:180818

TITLE: Preparation of piperazine derivatives as drugs

INVENTOR(S): Kumagai, Kazuhiro; Nagasawa, Masaaki; Takahashi, Hidenori; Abe, Tooru; Omata, Takeshi; Segawa, Yoshihide

PATENT ASSIGNEE(S): Zeria Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

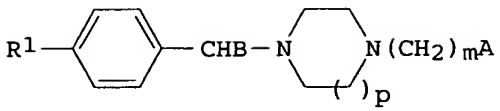
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

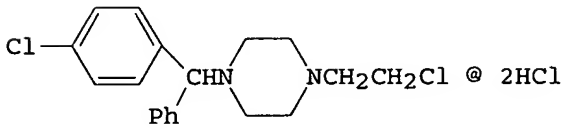
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9302062	A1	19930204	WO 1992-JP833	19920702
W: AU, CA, JP, KR, RU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2113449	AA	19930204	CA 1992-2113449	19920702
AU 9222316	A1	19930223	AU 1992-22316	19920702
AU 658656	B2	19950427		
EP 598123	A1	19940525	EP 1992-914249	19920702
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 2767321	B2	19980618	JP 1993-502728	19920702
US 5432179	A	19950711	US 1993-170198	19931230
PRIORITY APPLN. INFO.:			JP 1991-203755 A	19910719
			WO 1992-JP833 A	19920702

OTHER SOURCE(S): MARPAT 119:180818

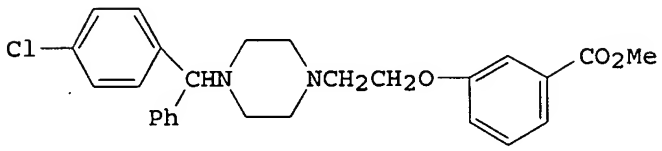
GI



I



II



III

AB Piperazine derivs. [I; A = (substituted) phenoxy, pyridyloxy, quinolinyloxy, indolinyloxy, etc.; B = Ph, pyridyl; R1 = H, halo; m = 2, 3' p = 1,2], useful as antiallergic, antihistaminic, and antiasthmatic agents, are prepared and formulated. 3-HOC6H4CO2Me was added to a suspension of piperazine salt II and K2CO3 in Me2CO and then refluxed to give 68% III. I showed 52.3-86.4% allergy inhibition at 10 mg/kg orally in rats. I also showed IC50 of 0.14-1.59 μM in vitro against histamine in guinea pigs. Granular, tablet, and injection formulations are given.

IC ICM C07D295-08
ICS C07D295-10; C07D295-12; C07D295-14; C07D213-36; C07D213-80; C07D215-26; C07D401-12; C07D403-12; C07D257-04; C07D249-10; C07D209-14

CC 28-17 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 63

IT **Allergy** inhibitors
Antihistaminics
(piperazine derivs.)

IT 150184-80-8P 152325-44-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as **allergy** inhibitor)

IT 79310-67-1P 139329-39-8P 139329-66-1P 150167-28-5P 150167-29-6P
150167-30-9P 150167-31-0P 150167-32-1P 150167-33-2P 150167-34-3P
150167-35-4P 150167-36-5P 150167-37-6P 150167-38-7P 150167-39-8P
150167-40-1P 150167-41-2P 150167-42-3P 150167-43-4P
150167-44-5P 150167-45-6P 150167-46-7P 150167-47-8P
150167-48-9P 150167-49-0P 150167-50-3P 150167-51-4P 150167-52-5P
150184-41-1P 150184-42-2P 150184-43-3P 150184-44-4P 150184-45-5P
150184-46-6P 150184-47-7P 150184-48-8P 150184-49-9P 150184-50-2P
150184-51-3P 150184-52-4P 150184-53-5P 150184-54-6P 150184-55-7P
150184-56-8P 150184-57-9P 150184-58-0P 150184-59-1P 150184-60-4P
150184-61-5P 150184-62-6P 150184-63-7P 150184-64-8P 150184-65-9P
150184-66-0P 150184-67-1P 150184-68-2P 150184-69-3P 150184-70-6P
150184-71-7P 150184-72-8P 150184-73-9P 150184-74-0P 150184-75-1P
150184-76-2P 150184-77-3P 150184-78-4P 150184-79-5P 150184-81-9P
150184-82-0P 150184-83-1P 150184-84-2P 150184-85-3P 150184-86-4P
150184-87-5P 150324-40-6P 150324-41-7P 150324-42-8P 150324-43-9P

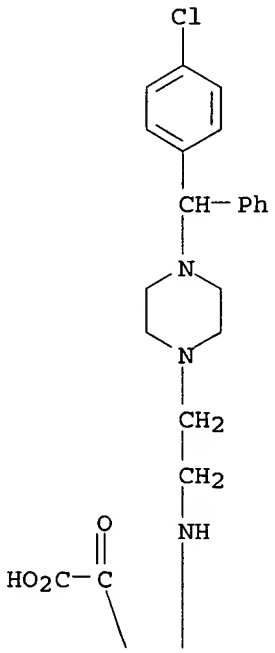
150324-45-1P 150324-46-2P 150324-47-3P 150324-48-4P 150324-49-5P
150324-50-8P 150324-52-0P 150324-54-2P 150324-55-3P
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as drug)

IT **150167-44-5P**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as drug)

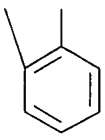
RN 150167-44-5 HCAPLUS

CN Benzeneacetic acid, 2-[[2-[4-[(4-chlorophenyl)phenylmethyl]-1-piperazinyl]ethyl]amino]-α-oxo-, monosodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



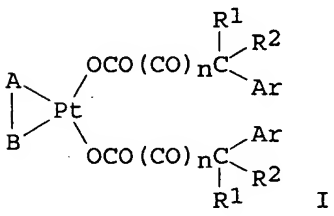
● Na

L102 ANSWER 96 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:151849 HCAPLUS
DOCUMENT NUMBER: 112:151849
TITLE: Platinum (II) complexes as **neoplasm** inhibitors
INVENTOR(S): Hirai, Kenji; Fujita, Atsuko; Yokota, Masahiro; Yamada, Kaoru; Ishii, Yoshimitsu
PATENT ASSIGNEE(S): Sagami Chemical Research Center, Japan; Chisso Corp.
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8904317	A1	19890518	WO 1988-JP1123	19881105
W: US				
RW: CH, DE, FR, GB, IT				
JP 02000294	A2	19900105	JP 1988-56152	19880311
JP 07062023	B4	19950705		
JP 01249791	A2	19891005	JP 1988-74677	19880330
EP 386243	A1	19900912	EP 1988-909613	19881105
R: CH, DE, FR, GB, IT, LI				

PRIORITY APPLN. INFO.:
JP 1987-279149 A 19871106
JP 1988-56152 A 19880311
JP 1988-74677 A 19880330
WO 1988-JP1123 W 19881105

OTHER SOURCE(S): MARPAT 112:151849
GI

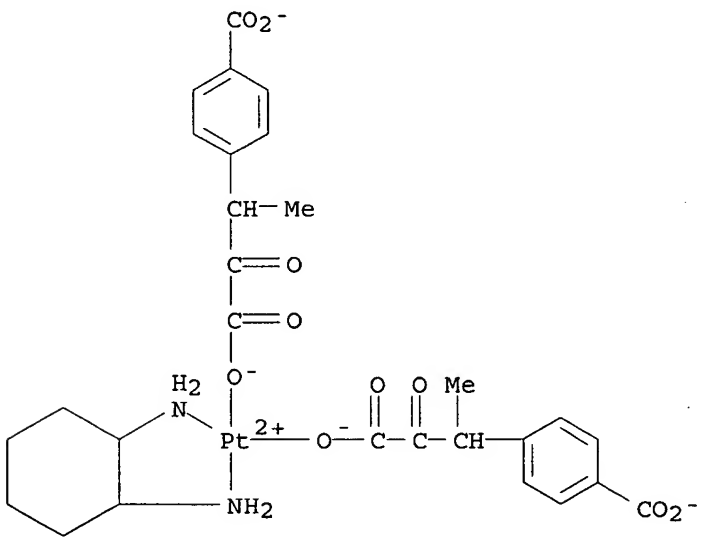


I

AB Pt(II) complexes [I; AB = bindentate diamine ligand; R1, R2 = H, C1-8 alkyl; R1 = R2 ≠ H; Ar = aryl; n = 0, 1] are neoplasm inhibitors. Thus, bis[(+)-2-(6'-methoxy-β-naphthyl)propionato](trans-l-1,2-diaminocyclohexane) Pt (II) markedly inhibited the growth of mouse lymphatic leukemia cells in 10% calf fetal serum-containing RPAI-1640 medium. The IC50 value was 0.011 μg/mL. Preparation of I is described. Thirty-three I compds. are specified.
IC ICM C07F015-00
ICS C07C087-14; A61K031-28
CC 1-6 (Pharmacology)
Section cross-reference(s): 29
ST **neoplasm** inhibitor platinum complex
IT **Neoplasm** inhibitors
(platinum complexes as)

IT **Neoplasm** inhibitors
(lymphatic leukemia, platinum complexes as)
IT 125429-87-0P 125429-88-1P 125429-89-2P 125429-90-5P 125429-91-6P
125429-92-7P 125429-93-8P 125429-94-9P 125429-95-0P 125429-96-1P
125429-97-2P 125429-98-3P 125429-99-4P 125430-00-4P 125430-01-5P
125430-02-6P 125430-03-7P 125430-04-8P 125430-05-9P 125430-06-0P
125430-07-1P 125430-08-2P **125430-09-3P** 125445-72-9P
125445-73-0P 125445-99-0P 125446-00-6P 125446-01-7P 125474-55-7P
125474-56-8P 125514-88-7P 125515-53-9P
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as **neoplasm** inhibitor)
IT **125430-09-3P**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as **neoplasm** inhibitor)
RN 125430-09-3 HCAPLUS
CN Platinate(2-), bis[4-carboxy-β-methyl-α-oxobenzenepropanoato(2-)](1,2-cyclohexanediamine-N,N')-, disodium, [SP-4-2-2(1R-trans)]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

●2 Na+

L102 ANSWER 97 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:74242 HCAPLUS
DOCUMENT NUMBER: 108:74242
TITLE: Immunomodulator α-ketoisocaproate for improving

commercial performance of domestic animals
INVENTOR(S): Nissen, Steven L.
PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc., USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

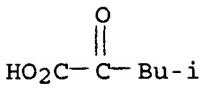
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8705506	A1	19870924	WO 1987-US487	19870309
W: AU, JP				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
US 4758593	A	19880719	US 1986-838356	19860311
US 4760090	A	19880726	US 1986-838357	19860311
US 4764531	A	19880816	US 1986-838355	19860311
US 4835185	A	19890530	US 1987-20607	19870302
AU 8771629	A1	19871009	AU 1987-71629	19870309
EP 258422	A1	19880309	EP 1987-901996	19870309
R: DE, FR, GB, IT, NL				
JP 63502835	T2	19881020	JP 1987-501930	19870309
CA 1308294	A1	19921006	CA 1987-531647	19870310

PRIORITY APPLN. INFO.:

US 1986-838355	A	19860311
US 1986-838356	A	19860311
US 1986-838357	A	19860311
WO 1987-US487	A	19870309

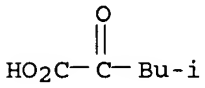
AB The com. performance of domestic animals is improved by feeding α-ketoisocaproate (KIC) in a form nutritionally utilizable by the animals. The KIC enhances blastogenesis of the animal's T-lymphocytes and reduces plasma cortisol levels. The result is a favorable effect on the immune function of the animal, and can be used to counteract stress-associated immunosuppression. The method is applicable to beef, cattle, dairy cattle, sheep, goats, swine, and poultry, as raised, resp., for meat, milk, wool, or egg production Laying hens were given a feed composition of Na KIC 2.0, corn 672.5, soybean meal 214.0, meat and bone meal 20.0, animal fat 15.0, limestone powder 60.0, dicalcium phosphate 10.0, D,L-methionine 0.5, vitamin premix 5.0, and salt and trace minerals 3.0 lbs/1000 lbs. Feed intake was not changed but the average number of eggs/hen increased by 10.2% and the egg yolk cholesterol decreased by 7%.

IC ICM A61K031-19
ICS A61K037-54
CC 18-6 (Animal Nutrition)
Section cross-reference(s): 1, 15
IT 816-66-0 **4502-00-5**, Sodium α-ketoisocaproate
51828-95-6, Calcium α-ketoisocaproate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; BIOL (Biological study); USES (Uses)
(com. performance of domestic animals enhancement by)
IT **4502-00-5**, Sodium α-ketoisocaproate **51828-95-6**, Calcium α-ketoisocaproate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **FFD (Food or feed use)**; BIOL (Biological study); USES (Uses)
(com. performance of domestic animals enhancement by)
RN 4502-00-5 HCAPLUS
CN Pentanoic acid, 4-methyl-2-oxo-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 51828-95-6 HCAPLUS
CN Pentanoic acid, 4-methyl-2-oxo-, calcium salt (9CI) (CA INDEX NAME)

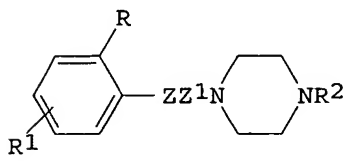


●1/2 Ca

L102 ANSWER 98 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:550706 HCAPLUS
DOCUMENT NUMBER: 95:150706
TITLE: Piperazine derivative, processes for the preparation therof, and pharmaceutical composition comprising the same
INVENTOR(S): Teraji, Tsutomo; Oku, Teruo; Namiki, Takayuki
PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd., Japan
SOURCE: Brit. UK Pat. Appl., 14 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2056968	A	19810325	GB 1979-29092	19790821
JP 56032474	A2	19810401	JP 1980-115296	19800820

PRIORITY APPLN. INFO.: GB 1979-29092 A 19790821
OTHER SOURCE(S): MARPAT 95:150706
GI



I

AB Piperazines I [R = CO2H, CO2H derivative, acylamino; R1 = H, halo, alkyl, alkoxy, aryl, acylamino; R2 = aralkyl; Z = NR3, O, S, NHCO (R3 = H, acyl);

Z1 = alkylene], and their pharmaceutically acceptable salts, having antiallergic activity, were prepared E. g., a solution of 1-[3-(4-benzhydryl-1-piperazinyl)propyl]isatin in N aqueous NaOH and THF was treated by dropwise addition of 15% aqueous H2O2 at room temperature and the mixture was stirred 5 h at 70°, cooled to room temperature, treated with Na2SO3 (pH 1, 10% HCl), diluted with EtOAc, adjusted to pH 9 (aqueous NaHCO3), and stirred 0.5 h to give I [R = CO2H, R1 = H, R2 = CHPh2, Z = NH, Z1 = (CH2)3] (II). A 10 mg/kg p.o. dose of II produced complete inhibition of anaphylactic asthma in guinea pigs.

IC C07D295-04; A61K031-495; C07C127-19; C07D209-38
CC 28-18 (Heterocyclic Compounds (More Than One Hetero Atom))
ST arylaminoalkylpiperazine **allergy asthma** inhibitor; piperazine arylaminoalkyl **allergy** inhibitor; aryloxyalkylpiperazine **allergy** inhibitor; arylthioalkylpiperazine **allergy** inhibitor; arylamidoalkylpiperazine **allergy** inhibitor; aralkylpiperazine **allergy** inhibitor
IT **Allergy**
Asthma
(inhibitors of, aralkylpiperazine derivs. as)
IT 14422-49-2P **79310-58-0P** 79310-59-1P 79310-60-4P
79310-61-5P 79310-62-6P 79310-63-7P 79310-64-8P 79310-65-9P
79310-66-0P 79310-67-1P 79310-68-2P 79310-69-3P 79310-70-6P
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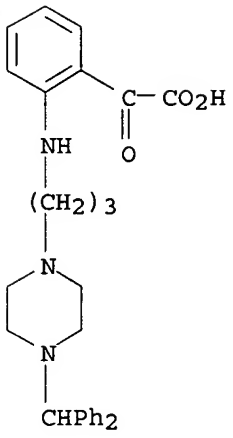
79310-88-6P 79310-90-0P 79310-91-1P 79310-92-2P
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as **allergy** inhibitor)
IT **79310-58-0P**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as **allergy** inhibitor)
RN 79310-58-0 HCAPLUS
CN Benzeneacetic acid, 2-[[3-[4-(diphenylmethyl)-1-piperazinyl]propyl]amino]-α-oxo-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L102 ANSWER 99 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1978:486880 HCAPLUS
DOCUMENT NUMBER: 89:86880
TITLE: Effect of various glycolytic and TCA intermediates on aflatoxin production
AUTHOR(S): Buchanan, R. L.; Ayres, J. C.
CORPORATE SOURCE: Dep. Food Sci., Univ. Georgia, Athens, GA, USA
SOURCE: Journal of Food Safety (1977), 1(1), 19-28
CODEN: JFSADP; ISSN: 0149-6085
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effects of pyruvate, succinate, citrate, α-keto glutarate, fumarate, malate, acetate, and glycerol supplementation (0.5, 1.0, and 2.0 g/100 mL) on aflatoxin (B1, B2, G1, and G2) production by Aspergillus parasiticus NRRL 2999 were examined in synthetic and semisynthetic media. Glycerol, lactate, and the 0.5 g/100 mL level of pyruvate stimulated production in the synthetic medium. At the 2.0 g/100 mL level, pyruvate, citrate, α-keto glutarate, fumarate, and malate inhibited aflatoxin accumulation in both media. With the exception of glycerol, all supplements stimulated sporulation and elevated the pH of the cultures.

CC 10-1 (Microbial Biochemistry)
Section cross-reference(s): 4, 17

IT Carboxylic acids, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(aflatoxin formation by Aspergillus **parasiticus** response to)

IT Aspergillus **parasiticus**
(aflatoxin formation by, carboxylic acids effect on)

IT Aflatoxins
RL: FORM (Formation, nonpreparative)
(formation of, by Aspergillus **parasiticus**, carboxylic acids effect on)

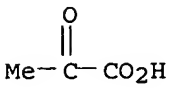
IT 56-81-5, biological studies 68-04-2 72-17-3 97-67-6 **113-24-6** 149-61-1 150-90-3 **305-72-6** 7704-73-6
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)

(aflatoxin formation by Aspergillus **parasiticus** response to)

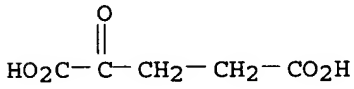
IT 1162-65-8 1165-39-5 7220-81-7 7241-98-7
RL: FORM (Formation, nonpreparative)
(formation of, by Aspergillus **parasiticus**, carboxylic acids effect on)

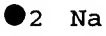
IT **113-24-6 305-72-6**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(aflatoxin formation by Aspergillus **parasiticus** response to)

RN 113-24-6 HCAPLUS
CN Propanoic acid, 2-oxo-, sodium salt (9CI) (CA INDEX NAME)



RN 305-72-6 HCAPLUS
CN Pentanedioic acid, 2-oxo-, disodium salt (9CI) (CA INDEX NAME)





L102 ANSWER 100 OF 100 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:1745 HCAPLUS
DOCUMENT NUMBER: 68:1745
TITLE: Antidiabetically active radical in the chemical structure of mesoxalic acid
AUTHOR(S): Takeuchi, Setsuya
CORPORATE SOURCE: Dep. Pharmacol., Nippon Med. Sch., Tokyo, Japan
SOURCE: Japanese Journal of Pharmacology (1967), 17(3), 333-9
CODEN: JJPAAZ; ISSN: 0021-5198
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The antidiabetic activity of 32 compds. related to mesoxalic acid was examined by the true glucose tolerance test in rabbits. Of the 11 dibasic carboxylic acids tested, only mesoxalic acid had activity. The min. effective dose of Na mesoxalate was 100 mg./kg./day with an assigned mesoxalinic potency of 1. Dihydroxyacetone had no effect. No antidiabetic activity was found in any of 7 mesoxalic acid derivs. such as di-Me mesoxalate. Of the 6 compds. related to alloxan tested, only alloxanic acid had any activity. The mesoxalinic activity of alloxanic acid occurred at 30-100 mg./kg./day, with mesoxalinic potency of 3, and alloxanic activity was found at >300 mg./kg./day with a potency of 0.01. The min. effective dose of alloxan for alloxanic activity was 3 mg./kg./day. Alloxan also had a strong mesoxalinic action, the min. effective dose being 1 mg./kg./day. 1,2,3-Cyclohexanetrione and kroconic

acid were active at 30 and 10 mg./kg./day, resp., with mesoxalinic potencies of 3 and 10, resp. Rhodizonic acid, trichinoyl and leuconic acid had mesoxalinic potencies of 100 and no alloxanic activity. Compds. possessing serial polyketones of more than 3 were judged active, while compds. possessing a -COCH(OH)CO-, -COC(:S)CO-, or -COC(:NH)CO- group were inactive. Introduction of an NH group into polyketones enhanced their diabetogenic activity and mesoxalinic activity; that is, antidiabetic activity of tetraketones or hexaketones was stronger than that of triketones.

CC 15 (Pharmacodynamics)

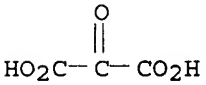
IT Molecular structure-biological activity relationships
(antidiabetic and **diabetogenic**, of mesoxalic acid derivs.)

IT 118-76-3 319-89-1 470-44-0 527-31-1 4322-62-7 **6629-94-3**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(pancreas response to)

IT **6629-94-3**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(pancreas response to)

RN 6629-94-3 HCAPLUS

CN Mesoxalic acid, monosodium salt (8CI) (CA INDEX NAME)



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